The Veterinary Record.

(*Founded by William Hunting, F.R.C.V.S., 1888.*)

No. 51. DECEMBER 18, 1926. Vol. 6.

Veterinary Observation and Human Medicine.

A Contribution to the Study of Narcotism.

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It may be that the most important event in the history of the veterinary profession in this century is the establishment of a closer relationship with the medical profession, of which the admission of veterinary surgeons to the Royal Society of Medicine is an outward and visible sign. The gain to our science that must follow this *entente* is probably fairly equally contributed to by both professions, but the material and social advantage will be to the veterinary practitioner.

The critics of this affiliation are found chiefly among those who are proud to call themselves "practical" men.

The terminology which is used to designate as "theoretical" those who are chiefly concerned with the purely scientific side of veterinary work, and as "practical" those who act more instinctively, is misleading—the true differentiation is that which exists between science and art, of which the one is as necessary as the other. It is the scientist and not the artist who will gain from affiliation. Nothing will arise out of the proceedings of the Royal Society of Medicine, for example, which will increase the power of the veterinary artist to detect with sure and rapid judgment that slight deviation from the normal angle of the limb in rest and movement which is to his gifted eye plain evidence of incipient gonitis, or of sprain of the sub-carpal ligament; nothing will serve to improve the technique of the expert "spayer"; nothing will teach that inborn use of the voice and hands which dispels fear from the nervous animal. But much may inform the veterinary scientist; that Faculty which has given us for our aid a James Simpson and a Lister may well give us something more, and the closer we cleave to that source, the earlier and the better we shall profit.

Similarly, the medical profession will surely benefit from an interchange of ideas with men whose powers of observation are sometimes increased by constant exercise to a degree beyond those of a profession whose members rely more upon subjective evidence.

Hitherto the opinion of veterinary men has been too seldom sought in matters where it cannot logically be excluded. An instance is the medicinal value of alcohol. Is there anything in the experience of veterinary scientists throughout the world which might help in this tremendous problem of public health? The writer, for one, believes that there is. He has not been able to observe, or to satisfy himself from the observations of other veterinary practitioners, that alcohol has any value as a medicinal agent for the domesticated animals. While he can perfectly appreciate the indication for the administration of alcohol, for example, to a human subject of pneumonia whose normal life or family history may involve definite, if slight, alcoholism, he believes that in the treatment of pneumonia in animals alcohol is not of the least use, and he feels justified in assuming from that belief that alcohol would be similarly unnecessary for human beings if an alcohol-free community could be established for one generation. The use of alcohol-containing beverages had, of course, an abundant hygienic justification in the circumstances of ancient days, when otherwise potable water was often loaded with the causal organism of human diseases, and where throughout the entire winter wine provided for mankind almost the only source of vegetable acids. In addition to this, the appalling physical misery of many urban aspects of human life until quite recently seemed to require, for its temporary relief at least, some form of powerful narcotic or general anæsthetic of which alcohol is the most convenient example. With the relative disappearance of those circumstances the hygienic justification for alcohol as an article of daily use disappears, and mankind shows in its not inconsiderable desire for prohibition or voluntary abstinence that the need no longer really exists: those who desire its retention do so chiefly for social reasons with which we are not here concerned.

Another instance is the value of tobacco. What is there in the human race as distinct from the domesticated animals that seems almost universally to *require* the use of tobacco? Philosophically, it seems idle to deny that a custom which is ever spreading until it appears likely to embrace the entire adult human community should have no hygienic basis of justification. If it has no such basis, it is the only instance of the universal adoption of a useless custom, and the whole experience of philosophy and science is opposed to a single instance of anything so vast. It would be a complete negation of all proverbial wisdom, such as "Whatever is, is right," "The masses are always right"—*Vox populi vox dei*, and so forth. Imitation, the attribute common to ape and to man, may explain to some extent the spread of the habit, but it cannot account for its persistence for more than three centuries: the root of the matter goes deeper than the surface of fashion. In contradistinction to alcoholism, which has been shown to have no longer any hygienic justification for general use, there is no considerable motion for the prohibition or restriction of tobacco: its use is tacitly approved by a huge majority of the people, of all nationalities, all classes, and all degrees of culture.

The underlying reason for this approval may be revealed in the course of an enquiry into the fact that

tobacco is, for the most part unrecognisedly, a corrective of that universal result of civilisation—chronic constipation—which, we are told, probably correctly, by the New Health Society, is the chief cause of most non-specific diseases in human beings. What veterinary evidence is there to support this theory for the justification of the use of tobacco? There is very little, and what there is is negative, but, in the opinion of the writer, it exists.

The only animal affected to a noteworthy extent with chronic constipation is the dog, hence it is to the dog chiefly that we must look for our negative evidence. Chronic constipation, as a rule, only occurs in dogs if and when they are deprived of nature's chief safeguard against that disease, viz., *physical excitement* in the most comprehensive sense of that phrase, *i.e.*, the complete and abundant exaltation and exercise of the entire body, as occurs in fighting or hunting.

Any careful observer who has constantly followed hounds from their kennel to the meet (especially a pack that only hunts one or two days a week) will have noted in many hounds the difficult but successful transition from what is evidently a state of constipation to a complete and profuse opening of the bowels, co-incident with the joyous anticipatory excitement of the chase. This phenomenon does not occur to anything like the same extent on non-hunting days when the hounds are simply exercised. The trainer of racehorses knows that many horses completely empty their bowels at the familiar starting place of the training "gallop."

In hounds and horses, too, the motions often become more and more softened until, under the influence of continued excitement, actual diarrhœa occurs.

Here, then, are simple instances of indisputable evidence, with which every observant veterinary practitioner will agree, that in animals receiving food proper to their species and having ordinary exercise, there can exist a state of constipation which will be relieved by physical excitement more effectually than by any purgative medicine.

Sir W. Arbuthnot Lane hopes to find the panacea for human constipation in an alteration of the diet to include more "roughage." His hopes may not be fully realised. Other things being equal, a natural diet is, of course, the best, but nature's greatest peristaltic agent seems to be, not diet, but physical excitement.

The city clerk may not be able to avoid or relieve chronic constipation completely by eating brown bread: if he has taken part in war or in Rugby football, he may have found that being under enemy fire or being about to play an eventful match is far more efficacious. In ordinary civilised circumstances the life of man is often devoid of physical excitement; in fact, even when the possibility of such a thing exists he has, by sophistication, schooled himself to suppress it. A horse may get vast excitement from pulling a cart, as will a gang of Zulus in coaling a Union Castle steamer; a child of any nationality may get this natural stimulus from almost anything, but an adult European gardener propelling a wheelbarrow will not be similarly thrilled.

The inhalation of tobacco-smoke in strict moderation at certain times produces in many people, and probably in all people to a greater or less extent, a result similar in some respects to that produced by physical excitement. This is not, of course, an original observation: medical and philosophical literature contains many references to the action of tobacco-smoking on peristalsis; it is indeed an accepted scientific fact for which instances need not here be given. Some ascribe this effect of tobacco to habit; some to the action of nicotine (in conjunction possibly with pyridine) on the nervous system and glandular secretion; it is probably a blend of both. The well-diluted and aromatised vapour of nicotine is the mordant which sensitises the sympathetic nervous system for the better reception of the periodical impulse of habit. The maximum effect of tobacco upon peristaltic function is obtained by inhaling the smoke while at stool at the customary time of evacuation, which differs with individuals. For most people this maximum effect may be obtained by inhaling the smoke while at stool the first thing on rising in the morning (after early-morning tea), and thereafter abstaining from tobacco for the rest of the day. This custom, faithfully followed in conjunction with a natural diet and abstinence from alcohol, may as a rule be depended upon to become a reliable laxative. It is self-evident that abstinence from other narcotics such as alcohol is essential if the maximum effect of nicotine on the nervous system is to be obtained. Similarly, any considerable use of tobacco at times other than that of the customary daily impulse must lessen the periodical effect of this agent.

It may reasonably be objected that any remedy which involves the inhalation of tobacco-smoke is worse than the disease; be that as it may, it usually helps to overcome the disease if rationally practised. There is at any rate nothing else which can so conveniently overcome it; the treatment of constipation by diet alone is often inadequate; treatment by purgative drugs is scientifically unsound; treatment by liquid paraffin is over-rated, and treatment by enemata a slavery too tedious to be borne.

A notable point is that the effect of tobacco smoke inhalation *in moderation* does not wear off, but rather increases with time; no purgative drug has this property; there is no exception to the rule that a tolerance of every sort of purgative drug is sooner or later acquired by the ill-advised or unfortunate habitual user of these intestinal irritants.

Routine physical exercise, as compared with that more active form of exertion which is induced by physical excitement, is not in animals a notable stimulant of peristaltic action, although, of course, it assists in the general maintenance of normal function.

From this the writer assumes that in the human being the monotonous use of Swedish exercises or any other dull routine means will often fail to be of any real use in treating a constipation which requires for its alleviation something which, like tobacco, will operate upon the nervous rather than the muscular system. The writer, in short, submits the theory, with some evidence for that theory, that there is some-

thing obscurely interchangeable between the action of inhaled tobacco smoke and some aspects of the physical excitement which is a normal constitution of feral life—a primary and essential fact of unsophisticated mammalian existence.

Only such a theory as this can explain the adoption by almost universal consent of a habit or custom which on ethical or most scientific grounds appears to be vicious and unjustifiable.

Finally, the writer trusts that it will not be supposed that he is an advocate for the use of tobacco; he realises that a drug-habit which so readily lends itself to abuse is full of danger for the weaker brethren and therefore for the community. He believes that in its latent power to alleviate constipation tobacco-smoking is at the best only the lesser of two evils.

The substitution of a vice for a disease is not ideal: although dietetic treatment alone will often fail to relieve established intestinal stasis, the last and most hopeful word on this subject may yet rest with the dietetic reformer.

The latter beholds, with a vision that may be truer than is generally appreciated, the far-off prospect of a lacto-vegetarian millenium whereby, with stocial self-denial from the cradle to the grave, man shall at last have learned how to bring his alimentary system into better functional correspondence with a passionless existence.

Royal Society of Medicine.

Presidential Address to the Comparative Section.*

The first meeting of the session of the Comparative Medicine Section of the Royal Society of Medicine was held on October 27th, with the President, Sir D'Arcy Power, in the chair. Before reading his presidential address, the President paid a warm tribute to the late Sir William Leishman, the president-elect of the Section, and a resolution of sympathy with Lady Leishman was passed in silence.

Sir D'Arcy Power then read his presidential address. Mindful of his own limitations, he said, and acting on the advice of Apelles the Athenian, that a shoemaker ought not to criticise outside his trade, he had decided to speak about those who might have qualified for election to honorary membership of the Section of Comparative Medicine, and so give some idea of the origin of the Section. Like a river, medicine had a common source in natural history; it divided into two streams of human and veterinary medicine—both empirical—and reunited to form comparative medicine, which it was the business of the Section to maintain and to place on a scientific footing. The first to be considered as president, that was if he was not elected patron, would be Hippocrates, whose keen intellect recognised that the diseases of man and animals were very closely allied. Aristotle, the "Master of all who know," would at once have joined and have taught us much that was long forgotten and was only now being re-discovered. The first candidate for honorary membership, however, would undoubtedly be Mago, the Carthaginian, the "Father of agriculture," whose twenty-eight volumes on the subject had been translated into Latin and Greek. Xenophon, who had a very real and a very modern interest in horses, would have been a member, and so also would have been Vegetius, who was far in advance of his time, and who, ridiculing the idea of disease being evidence of divine wrath, advised the deep burying of dead animals. Pliny, who took all knowledge for his province, would also have been a member, and with him would have joined Celsus, a writer about whom it was still disputed whether he was practising physician, veterinary surgeon, or merely a literary Roman gentleman with scientific aspirations.

Leaving the ancients, Conrad Gesner, whose *Historiae Animalium* dealt at large with the diseases and habits of animals, would surely have been admitted. The next on the list would have been Gervase Markham, who, however, might have been blackballed, for Sir Frederick Smith said of him, that he knew nothing of his subject, and was not only a mean plagiarist, but a violently untruthful person! Robert Lovell would certainly have been admitted because of his *Compleat History of Animals and Minerals*, even though his book was a mere restatement of the learning of classical times and might well have been written in the Bodleian. John Hunter would surely have been elected first president had his times been ripe for inaugurating the Section, and he would as certainly have enlisted the assistance of Astley Cooper, the elder Cline, William Simmons, Edward Jenner, and Munro secundus, while Sainbel, the first principal of the veterinary college in London, would at least have attended the meetings. In our own times, Parker and his great expositor, Thomas Huxley, would have been members.

It thus came about that, by a gradual process of development, a society for the study of comparative pathology became possible. The Section owed much to Clifford Allbutt and Sims Woodhead, who wished to start such a society at Cambridge many years ago. However, no active spirit had come forward then, and it was not until the veterinary side of the profession became active that the Section became possible—possible also in a wider sense than had been originally planned, for it became comparative medicine instead of comparative pathology. The experiment was proving a great success. The work embraced a vast field, extending on the one side to the most difficult problems of human medicine, and on the other to the interrelation of human and veterinary medicine, showing thereby that the processes of disease, whether in man or in animals, were identical. Its world, too, touched the confines of tropical medicine—the most virile, the most progressive, and the most valuable of all branches of medicine to a country with a great colonial empire. For this reason a discussion had been arranged between that Section and the Tropical Diseases Section on trypanosomiasis, a subject which the late Sir William Leishman had made peculiarly his own.

Sir Arbuthnot Lane joined with the president in paying tribute to Sir William Leishman, and looked to a great future for the Section of Comparative Medicine.

* Reproduced from *The British Medical Journal*, November 6th, 1926.

Anthrax.*

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(*Continued from page* 1102).

The paper, as already distributed, gives a general account of anthrax as it occurs in domesticated animals, referring more particularly to susceptibility, symptoms and course of the disease, pathological anatomical diagnosis, spread of the disease, and a brief reference to the methods of immunisation. All these points might have been dealt with in greater detail, but it appeared to be of advantage to present the first part of the paper as you see it, and make further reference to the subject at this meeting. Moreover, a paper of this sort was asked for, for local publication, since no similar treatment has been submitted to the stockowners of this Colony. The paper before you was considered as possibly suiting this purpose, and it will therefore be taken as read.

The points which would appear to deserve further discussion are those of methods of infection and spread of the disease, and control and immunisation.

No reference has been made to the biology of the anthrax organism as observed by laboratory workers, nor to laboratory methods of diagnosis. Should it be desired subsequently to refer to this aspect of anthrax, I shall be pleased to enter into the discussion. Anthrax is widely spread throughout the world, and although it is a disease which has received a considerable amount of attention both from laboratory and field workers and in some instances has been dealt with by strict legislation, the disease appears to be alarmingly on the increase in some countries, *e.g.*, America (especially in the Southern States), and in South Africa. In America anthrax is considered one of the most destructive scourges of livestock, while in South Africa it is considered to be responsible for more mortality amongst stock than any other disease, with the exception of East Coast fever. So serious is the situation in South Africa that, in addition to strict legislation, in an attempt to prevent spread of infection (disposal of infected carcases, etc.), the Government has authorised the free issue of anthrax vaccine to all stockowners in the Union, and the loss of revenue from this free issue is estimated to be at £30,000 per annum.

It is not possible, as yet, to indicate the exact incidence of the disease in this Colony, although it must be considered to be fairly great, and is very probably much greater than we suppose, especially in native-owned stock. Moreover, the climatic conditions, etc., obtaining in this country are not unlike, in many respects, those of South Africa. It would appear possible, therefore, that anthrax, without strict control in Kenya, may assume the proportions of the serious menace it is assuming in South Africa.

Further, anthrax is a disease which should not be considered from a local standpoint only. It is, so to speak, an international problem, owing to the transmissibility of the infection into clean areas in distant countries by means of infected animal products—hides, wool, hair, bone meal, blood and bone manures, etc. Infection in both man and animals in European countries, the British Isles and America, is very frequently proved to originate from the importation of infected animals and vegetable products from such countries as India, China, Egypt, Japan, and with the existing conditions in Africa generally, this country is probably not without blame in this connection.

In addition to the established disinfecting station in England, the British Government, is, it is understood, contemplating legislation to prevent the importation of materials from countries where anthrax is known to be prevalent, and which countries have been proved guilty of exporting infected material, unless such materials have been subjected to a satisfactory process of disinfection at the port of export. It is possible, therefore, that this further economic aspect of the disease will have to be dealt with is Kenya. The control of anthrax requires, in addition to legislation, the co-operation of the stockowners, the veterinarian, and the sanitarian and, since it is a disease entirely of animal origin, it should be dealt with, in the first instance, from a scientific point of view, by the veterinarian.

So far as the infected animal is concerned, anthrax holds its own, in acute cases, as one of the most rapidly fatal of the microbial diseases affecting the veterinary patient. Drugs such as salvarsan, neosalvarsan, acriflavine, and others are reported to be of value, but the treatment must, as yet, be of limited value in the control of the disease.

It is, therefore, from the point of view of control of spread of the disease, by preventive measures, that the veterinarian and sanitarian must deal with anthrax, not only to prevent losses amongst stock, but also to eliminate spread of infection to man.

Methods of Infection.

Ingestion is a proved and recognised method of infection of anthrax in all animals, including man. It is extraordinary, however, how some known susceptible animals fail to become infected even by the administration of large doses of the virus.

The bacillary forms of the organism are destroyed by the digestive juices, but may possibly infect by means of injuries to the alimentary mucosa before the digestive juices are reached. It is considered that such injury permits infection with spores, although, as will be seen later, while the digestive juices do not actually destroy all spores ingested, there are certain inhibitory factors to the development of the anthrax spores in the intestine.

According to Tissié, in Madagascar, anthrax occurs frequently in bovines in the dry season, when a particular plant (*Andropogon contortus*—commonly called *danga*) is present and which grass injures the first portion of the alimentary tract of cattle already weakened by shortage of food. He says, further, that during this period infected animals show an œdema of the parotid region, and that as a preventive against bovine infection during this season, the natives burn the grass.

The pharyngeal symptoms seen in horses and pigs, and dogs and other carnivora affected with anthrax would appear to indicate a local infection, but whether this is necessarily the result of an injury to that part of the mucous

* Address delivered on the occasion of the Second Ordinary General Meeting of the Veterinary Medical Association of Kenya Colony and Protectorate, held at the Veterinary Laboratory, Kabete, on July 30th and 31st, 1926.

membrane, or is a peculiar susceptibility of the animals concerned, is a debatable point. It has been proved experimentally that submucous inoculation of anthrax virus into the pharyngeal region does produce the lesions seen in natural cases.

As long ago as 1904, Gilruth, in New Zealand, showed that guinea-pigs, rabbits and sheep, can completely resist the inoculation of large doses of virulent anthrax bacilli, provided these organisms are *mixed* with a larger quantity of certain other organisms which are non-pathogenic for these animals, and that death is frequently delayed when these latter organisms are only *slightly* pathogenic for the animals mentioned. From this observation, it would seem possible that the admixture of the normal or slightly abnormal intestinal flora might influence the infection of animals by ingestion. One might ask why it is that in an outbreak only a few animals are infected and that these are often only the apparently fat and healthy ones ? It has been shown further by Sanarelli that in rabbits and guinea-pigs it is rarely possible to produce the so-called intestinal anthrax mycosis by ingestion of bacilli or spores. The bacilli are rapidly killed by the gastric and intestinal juices, while the spores are not so destroyed, but their development is prevented either in fresh, old, or heated intestinal juices. Sanarelli showed further that the intestinal juices had no such action on ordinary intestinal bacteria. When spores were ingested by the mouth, they could be demonstrated a few hours later in the lungs, and later in the spleen and other viscera. The aspiration of spores into the lungs was not fatal except when enormous doses were injected (100,000 spores), and the organism in non-fatal cases could be demonstrated in other body-organs, *e.g.*, spleen and liver, even after several days. It was found possible to stimulate such latent organisms to activity by injecting some substance into the spleen, liver or kidneys, as, for example, arsenic, lactic acid, sodium hyposulphite, living and dead cultures of colon bacilli, or even distilled water, which substances produced a necrotic area. The spores were then able to germinate, invade the blood and set up a fatal septicæmia. In other words, these animals were actually " carriers " of anthrax. The same result was produced by exposure of these " carriers" to adverse conditions, such as incubation at 37°C. on a number of occasions, or by feeding them on a diet deficient in water ; such a diet proved fatal to normal rabbits in six weeks, while " carrier " rabbits died in a week.

Sanarelli considers that intestinal lesions present in anthrax are not due to enteric, but to hæmotogenous infection, and that spores taken in by the mouth are partly aspirated or taken by other ways to the lungs. Further, he does not believe that anthrax intestinal mycosis is the direct result of infection by way of the intestinal mucosa. From these experiments it would appear that infection with anthrax by ingestion is possible only after injury to the alimentary mucosa, and that the conditions obtaining in the alimentary canal are very unfavourable generally to anthrax infection.

So-called inhalation infection of anthrax does occur in man and may possibly occur in animals.

In whatever way anthrax organisms reach the lungs, liver and kidneys, etc., and there remain latent (as shewn by Sanarelli), it does lend suspicion to the possibility of anthrax " carriers." It does not indicate how long animals may remain " carriers " in this way. It is possible, however, that spores of anthrax may be carried in the intestine for some considerable time, and dogs fed on infected material have been shown to carry spores in their fæces up to a period of eight weeks after ingestion.

It has been frequently reported and observed that animals after a train journey or a sea voyage, or cattle and sheep after dipping, suddenly die from anthrax. A case in point is mentioned by a veterinarian in the Canal Zone where cattle are imported to that area from Colombia. The majority of cases of anthrax in bovines, and these are frequent, occur immediately after the animals are carried off the ship, and in this case, breakdowns in carrier animals are suspected.

In preventive anthrax inoculation, delayed reactions are sometimes observed. It would seem possible that, in these cases, injected organisms are held up at the point of inoculations and are subsequently released, producing a reaction.

Infection by inoculation occurs in the case of malignant pustule in the human subject and the means whereby man becomes so infected are so well known that no mention need be made of them here. In the case of the domesticated animals, however, this method is not generally recognised, except if one considers those cases in horses, pigs, etc., where definite local symptoms are observed in the pharyngeal regions as being due to direct inoculation of this mucous membrane. If intestinal infection results from the entry of the organism through a mucous membrane abrasion, this may be considered as a form of inoculation anthrax. In the case of animals, however, there appears to be further evidence of direct infection by inoculation, as it is generally understood, and this in connection with fly transmission. If Besredka's idea of cutaneous susceptibility holds with the larger domesticated animals, and since biting flies have been proved capable of infecting by mechanical transmission, it is possible that this form of infection of anthrax plays a greater part than has been supposed. With regard to biting flies, species of horse-flies (Tabanas and Hippobosca), the stable-fly (Stomoxys), the horse-fly (Næmotobia), and a mosquito (Peorophora), have been shown to be capable of carrying infection from a sick to a healthy animal, and even from an infected animal immediately after death. In the horse, especially, this method of infection is maintained to be considerable. Both horses and cattle frequently show subacute forms of the disease, characterised by local swellings on any part of the body, but particularly under the abdomen, sternum, on the sheath, etc., and on the upper part of the forelimbs. The parts are not so easily protected from fly-infestation, and this would lend support to the idea of this type of the disease being transmitted by means of flies. Sheep do not show this subacute form of the disease and these animals are no doubt protected from fly infestation by means of their wool. Anthrax is frequently observed to be more prevalent in the fly season and also more subacute cases are often seen, during this season especially, in areas where flies (horse flies) are numerous. To those veterinarians who recollect the outbreak of subacute anthrax at Muharesi, some years ago, would not this contention ap-

pear a feasible explanation of the numerous cases which appeared in bovines?

Further, it has been proved that non-biting flies can carry infection mechanically on their probosces and feet for a period of five hours after having fed on infected flesh, and so infect open wounds, and a similar result has been demonstrated when these insects have fed on the serous fluid which exudes from opened swellings in animals surgically treated. From this latter it can be seen that the opening of anthrax swellings on infected animals is a dangerous practice, and, incidentally, it is of very doubtful value therapeutically. The greatest danger in the practice lies in the possible spilling of infected material on the ground. Flies fed on infected sheep fifteen minutes before death, at death, and fifteen minutes after death, have been proved capable of transmitting infection by biting susceptible animals. Whether flies are responsible in this way for infection of large numbers of stock without fatal results, or even without giving rise to observable symptoms, but with the establishment of some immunity, is a debatable point, and has been considered as an explanation of the natural control of spread of the disease in tropical countries.

THE SPREAD OF INFECTION AND THE CONTROL OF ANTHRAX.

This has already been dealt with, but a few points of practical import may be mentioned.

One can safely say that the most serious source of infection is the infected carcase, and, in the first instance, satisfactory methods should be adopted with regard to the disposal of infected material. Complete burning should be accomplished in this country, in most cases, with comparative ease.

The whole carcase, and its immediate surroundings, and any place suspected of being contaminated with discharges or spilled blood, should be similarly treated, and while awaiting confirmation of diagnosis, or for any other reason, should the disposal of the carcase be delayed, the natural orifices should be plugged with tow to prevent the escape of infected material. Some attempt should be made to prevent fly infestation of the carcase. As mentioned before, biting flies may actually infect a susceptible animal, if they feed on an infected one, at, or immediately after death.

Ants are known to carry infection, mechanically, and, in this country, it is quite possible that infective material can be disseminated by this means to some considerable extent.

The blue bottle fly, or blow fly, bred out of an unopened carcase, has been proved to be unable to carry infection either in or on its body, but if bred in the presence of spores of anthrax, it can carry the infection either in or on its body. This is a further reason for not opening an infected carcase, and for keeping the natural openings of the carcase closed.

Dogs, pigs, cats and fowls have been proved capable of spreading infection after having fed on anthrax-infected flesh, or artificially-prepared food containing anthrax spores, not only by contaminating places by directly spreading the flesh, hide, etc., but also by the ingestion of spores which are passed out in the fæces. The dog is generally considered the animal, or one of the animals, least susceptible to anthrax, and it is this which renders it one of the most dangerous disseminators of the disease. It has been shown that dogs pass anthrax spores in their fæces, up to six days after the ingestion of infected material. A similar degree of importance as regards disseminators of anthrax spores may possibly be assigned to wild carnivora. That, no doubt, applies to the wild carnivora and carrion found in this country. In Kenya, buried carcases are so frequently unearthed by hyænas, etc., and even by the natives themselves, that the method of disposal of carcases by burial, even if carried out according to requirements, cannot be considered to be satisfactory, and indeed, it would appear doubtful whether it should be permitted.

With regard to the spread of infection from the infected animal, in addition to the discharges—fæces, urine, etc., and the exudate from the open infected swellings, the milk can be responsible. The milk of an infected animal has been proved to contain the anthrax bacilli some hours before death—in one instance, 7½ hours before death, and cases of anthrax in human beings have been traced to milk infection. The milk secretion of an infected animal is usually suppressed early on in the disease and this no doubt explains the rarity with which this agent is involved.

To what extent wild herbivora in this country are responsible for spreading infection, in that they may become infected and die, is not known.

Natural outbreaks of anthrax have been confirmed in Wildebeeste and in smaller game. As a rule, however, game do not graze over the possible infected areas, *e.g.*, old native cattle bomas, and they may not be materially responsible for the spread of infection.

With regard to the disinfection of hides, wool, hair, etc., exported from known infected countries, and which materials have been proved responsible for infection in England and other countries, the British Government are taking steps to prevent the importation of such suspicious material. An Anthrax Disinfecting Station has been established in Liverpool, where disinfection is carried out, and this process includes the disinfection of East Indian goat hair, and Egyptian wools and hairs. This work is the result of the recommendation of a Departmental Committee appointed by the Home Office in 1918, and which Committee reported in favour of the compulsory disinfection of raw material infected or likely to be infected with anthrax.

The Anthrax Prevention Act, passed in 1919, gives power for the total prohibition of goods infected or likely to be infected with anthrax or for their importation at specified ports only, subject to conditions as to disinfection, etc.

In view of the fact that hides are responsible for the spread of infection, it may be of interest to mention some of the methods used in their disinfection.

1. *Lime Disinfection.*—Consists of a 12-hour soak in a suspension of 15 lbs. of burnt lime, or of hydrated lime, per 100 galls. of water.

2. *Mercurial Chloride Disinfection.*—Consists of a 24-hour soak in a 1 in 1000 solution.

3. *Schattenfroh's Method.*—Consists of a 24-hour soak in 3 per cent. hydrochloric acid in 10 per cent. sodium chloride solution.

4. *Seymour-Jones' Method.*—Consists of a 24-hour soak in 1 per cent. formic acid in a 1 to 1000 mercuric chloride solution.

5. *Smythe and Pike's Iodine Method*, which is held by the authors to be efficient and yet non-destructive to hides. It may be carried out in two ways :—

(a) By vapour disinfections in a gassing chamber, followed by a short soak in thiosulphate solution, then a rinsing and placing in lime pits.

(b) Wet disinfection, employing water as a solvent, or by employing an easily volatile solvent such as carbon tetrachloride, or carbon tetrachloride-petrol mixture.

Wool.—With regard to the disinfection of wool, the ideal method must fulfil the following requirements :—

(a) It must kill all anthrax in all wool or hair.

(b) It must not be dangerous to the operatives.

(c) Its use must be commercially possible, *i.e.*, it must be neither too costly in its application nor likely to cause damage to the raw material.

Kerol, formaldehyde, bleaching powder, mercuric chloride alone, the Seymour-Jones process, and Schattenfroh's method, have been tried. Some are ineffective *e.g.*, kerol. Others damage the raw material, *e.g.*, bleaching powder ; while others take too long to disinfect.

The Anthrax Investigation Board experimented with formaldehyde and found that at blood heat, and a 2 per cent. dilution, it would kill naked anthrax spores within thirty minutes without injuring the wool It was not found possible to disinfect bales of wool, but the following procedure was adopted :—

(a) The opened fleece is steeped in water (warm), to which a little soap and alkali are added.

(b) The fleeces are then passed through rollers to remove all air between wool. This is an important point.

(c) The fleeces are then kept in a 2-2½ per cent. formaldehyde bath at 102°-110°F. for twenty minutes.

(d) The fleeces are then passed again between rollers.

(e) They are then passed into a drying machine at 160°F.

(f) The wool is stored for at least forty-eight hours, to allow evaporation of the formaldehyde adhering to the wool, and this process kills the remaining spores.

Preventive Inoculation.

The methods of preventive inoculation include :—

(a) The inoculation of attenuated strains of the anthrax bacillus or spore.

(b) The use of immune serum, either alone or in combination with attenuated vaccines.

(c) The inoculation of anthrax aggressins.

These inoculations are usually made subcutaneously. Immune serum is injected intravenously as a curative measure, and, since the work of Besredka on the relation of the skin to anthrax infection, attempts are being made to confer immunity by cutaneous or intra-cutaneous injection of the attenuated organism.

The principle underlying the preparation of attenuated strains of the virus for vaccine production, has already been mentioned and no further mention will be made of Pasteur's 1st and 2nd vaccines, except in relation to cutaneous immunity. It may be said, however, that Pasteur's vaccines, in some countries, are not being considered in the same favourable light as formerly, mainly on account of their poor keeping qualities, and their inability, in some instances, to produce sufficient immunity in animals exposed to severe infection, or to infection of greater virulence than usual. Provided, however, that these vaccines are used soon after preparation, there is no doubt of their efficacy for general use. Pasteur's 1st and 2nd vaccines are issued from this Laboratory at the present time, and care is taken that frequent new issues are made.

Spore vaccines are made from attenuated strains of anthrax as in the case of the Pasteur's vaccines, but they are grown on solid media, instead of liquid media, for sufficient time for complete spore formation to take place. This surface growth is washed off with saline, and 60 per cent. glycerine added as a preservative. Tests are then carried out to standardise the vaccine for dosage and efficacy.

Spore vaccines are used extensively in America, Russia, South Africa, and Australia, and it is proposed, in the near future, to prepare spore vaccines in this laboratory for use in the Colony.

Several methods are employed in the use of spore vaccines. They may be used singly, or as double vaccines in two strains of different virulence, or even three strains may be used, in all cases with or without the use of anthrax serum. In America the following method has been employed with apparently great success, in cases where animals are exposed to extraordinarily severe infection :—

(a) The use of a spore vaccine of approximately the virulence of Pasteur's No. 2 vaccine, together with a dose of from 10-20 c.c. hyper-immune serum.

(b) After ten days the inoculation of a No. 3 spore vaccine slightly more virulent than No. 2.

(c) After a further ten days the inoculation of No. 4 vaccine slightly higher in virulence than No. 3.

In cases where this method was not completely satisfactory Nos. 3 and 4 vaccines were used at once, with the simultaneous inoculation of larger doses of serum.

For example, the following dosage was used :—

(a) For store cattle.—No. 4 vaccine *plus* 20 c.c. of serum.

(b) For breeding bulls and dairy stock.—No. 4 vaccine *plus* 35 c.c. serum.

(c) For horses and mules.—No. 4 vaccine *plus* 35 c.c. serum.

When a severe outbreak is existent at the time of inoculation, the best results are said to be obtained by giving 100 c.c. of serum *plus* No. 4 vaccine to all animals exposed.

These methods, obviously, have the disadvantage of the frequent handling of the animals to be inoculated, but it is held to produce good reactions, which are considered a necessary result of inoculation, in the production of strong immunity.

In all methods of vaccination, repeated re-vaccinations are sometimes necessary to check an outbreak or to prevent infection.

Good single spore vaccines have been used with success, and these correspond in virulence to Pasteur's 2nd vaccine and they are usually proved to check the disease in all but very severe outbreaks.

In America, such vaccines are held to produce reactions in about 95 per cent. of the animals inoculated, with usually no symptomatic disturbances in bovines, but more severe local reactions and occasionally systemic reactions in equines, especially horses.

Special vaccines are sometimes prepared for different species of animals, *e.g.*, equines—when these animals prove too susceptible to the vaccine issued for use in bovines.

In addition to the usual precautions given when carrying out anthrax inoculations, it should be remembered that the inoculation of animals in the incubative stage of the disease may have harmful effects, in that the onset of the virulent infection may be hastened.

It can be seen from the above that attempts at immunisation by means of vaccines and sera, are only attended with good results in some cases, after much special care in the preparation of the inoculating agents, and a study of the local conditions. The potency of these vaccines can only be truly judged in general practice, when a very heavy and severe exposure exists.

So far as I am aware, we have no record of such severe exposure in this Colony, and outbreaks are usually successfully dealt with by the inoculation of the laboratory vaccine in the usual way, followed by a further inoculation of the 2nd vaccine either in single or doubled doses at fortnightly intervals. However, until we are in a position to state definitely the incidence of anthrax in Kenya, our knowledge of the control by means of vaccination must be limited.

Immunity Against Anthrax by Aggressins.

Bail's work on infectivity and virulence of organisms opened up a field of investigation which has received considerable attention from time to time.

It is maintained by Bail that virulent bacteria can produce within the animal body substances upon which depend their invasive powers or virulence, and which substances are produced only against unusual defence of the animal body. He maintains, further, that these substsnces are non-toxic and are not demonstrable in test-tube cultures.

Opinion, generally, is divided as to whether aggressins are toxins or not, and when they are isolated and injected into an animal, whether they stimulate the formation of an anti-toxin, or whether they act by paralysing the action of phagocytes. It seems probable that aggressins are not toxins, since some organisms can be proved to produce definite toxins, *in vitro* or *in vivo*, and anti-toxins when these toxins are injected into the animal body, while others produce no demonstrable toxins, either *in vitro* or *in vivo*, and yet these latter organisms may produce, under certain conditions, substances which may bring about untoward results on injection into the animal body, and inability of the phagocytes to ingest the particular organism may be demonstrated.

It has been shown that encapsulated strains of a particular organism are more resistant to phagocytosis than non-encapsulated strains, and on this difference the variation in virulence is held to depend. But this factor does not wholly account for infection and virulence. Certain offensive characteristics distinguish the virulent from the avirulent bacteria, in that the former may secrete, within the living body, substances by which the destructive powers of serum and leucocytes are neutralised or held at bay.

Aggressin is obtained from the exudate which results from the injection of a virulent organism into the animal body, usually by the subcutaneous path. Bail demonstrated that :—

1. The injection of such sterilised exudates with sublethal doses of bacteria produces fatal infection, whereas injection of the bacteria alone had little effect.

2. Lethal doses of bacilli which ordinarily would cause a slow infection, cause a rapid and severe infection only when aggressins are added.

3. The injection of aggressin alone produces subsequent immunity.

Aggressin action must not be confused with bactericidal action of serum, in that the sera of animals highly susceptible to anthrax often possess distinct bactericidal powers, as demonstrated *in vitro*.

An animal immunised by the action of aggressin is able to prevent infection, not because its serum is bactericidal, but because the anti-aggressins formed neutralise the aggressin substance secreted by the bacteria, thus destroying their offensive powers and making them susceptible to phagocytosis. Animals treated with aggressins are actively immunised and the immune bodies in their sera are anti-aggressin and these may be transferred to other untreated animals.

Immunisation against blackquarter and hæmorrhagic septicæmia has been practised with good results, and in a recent article by Salsbery in America, the use of anthrax aggressin as an immunising agent against anthrax is investigated, and the result appears to be satisfactory.

Previous attempts to produce immunity against anthrax by means of aggressins have not met with much success, and have been discredited.

The preparation of the aggressin is reported not to be a difficult problem, nor to be attended by any great risk to the operators, and the final product is free from anthrax virus.

The following principles were demonstrated by Salsbery :

1. Aggressin action.
2. Active immunity in susceptible animals.
3. Passive transfer of anti-aggressin immunity.

With regard to (1) aggressin action. The authors demonstrated :—

1. That a sublethal dose of anthrax virus (spore vaccine No.1 into guinea-pigs) could be made to kill by the simultaneous injection of aggressin.

2. That if, in addition to a sublethal dose of anthrax virus and injection of aggressin, a further simultaneous injection of protective anti-aggressin serum was made, the animals survived. This experiment shows, moreover, that the inoculation of the aggressin during the negative phase of infection can produce untoward results.

With regard to (2)—active immunity in susceptible animals. The authors took as their experimental animals for test, guinea-pigs, rabbits, sheep and horses and mules, and after treating them with aggressin, exposed them to infection after periods varying from a week to a month, by injection of several minimal lethal doses of virulent anthrax which regularly killed control animals in a short

time. The tests appear very satisfactory, very few of the exposed animals treated dying in test.

In the case of horses and mules in this test, so satisfactory were the results that these animals were subsequently hyperimmunised for the production of anthrax serum. In the usual method for hyper-immunising horses, it takes about eight weeks to produce sufficient immunity by giving, firstly, serum and spore vaccine, then special spore vaccine, then increasingly small doses of virulent culture, 1 to 200 of a loopful to 1 loopful of virulent anthrax culture, until 1 c.c. of virulent culture can be injected. In the aggressin method, 10 c.c. of anthrax aggressin produced sufficient immunity in fourteen days to allow of an intravenous injection of 1 c.c. of a 24 days' old virulent broth culture and, in the case of mules, larger doses of virulent culture were given within the same time without fatal results.

With regard to (3)—passive transfer of anti-aggressin immunity : anti-aggressin serum was prepared by inoculating horses subcutaneously with increasing doses of anthrax aggressin at weekly intervals until seven such injections had been given. The tests of the serum were carried out on rabbits with apparently very good results.

With regard to the field test of anthrax aggressin against natural infection : in cattle 10,814 animals were treated with aggressins, while 2,684 were left as controls. The subsequent mortality from anthrax in treated animals was 0·3 per cent., while in the controls it was 27 per cent. The anthrax infection in the districts where the animals were exposed was heavy. In another test 77 mules were given the triple treatment with anthrax serum and spore vaccine. The triple treatment has already been described under spore vaccine.

One hundred and twelve cattle received aggressin—5 c.c. each. One hundred cattle untreated were left as controls. Eighty-five sheep were left as controls.

Result—In the mules treated with spore vaccine (triple treatment) the mortality was 14·3 per cent.

In the aggressin-treated cattle the mortality was 4·4 per cent.

In the untreated cattle left as controls the mortality was 60 per cent.

In the control sheep the mortality was 99 per cent., all but one out of a number of 85 head dying of anthrax.

If one can judge by the results obtained, anthrax aggressin would appear to be a valuable method of immunisation. The field experiments show what a heavy degree of infection is sometimes experienced in America. Such heavy infection does not apparently occur in this Colony.

If immunisation against anthrax can be conferred to animals by the inoculation of a sterile product such as aggressin, it would appear to be a possible method of giving some safety to Europeans whose work exposes them to infection.

With regard to cuti-infection, vaccination and immunity in relation to anthrax, you are, no doubt, all aware of Besredka's observations in this direction. It may not be out of place to give a short resumé of Besredka's conclusions and work :—

While it is possible to vaccinate the larger animals against anthrax, it has been found impossible to do so with the guinea-pig and rabbit. Besredka observed that a strong local reaction resulted in the guinea-pig when a shaved portion of the skin of this animal was painted with a swab soaked in "first" anthrax vaccine, and that the animal eventually recovered, while the same procedure adopted with the second vaccine produced death in the normal animal.

If, however, a guinea-pig is treated in this way, firstly with anthrax 1st vaccine, and, after recovery, with 2nd anthrax vaccine, death does not result, and if, after a further ten days, a virulent anthrax culture be so applied, a reaction results, but not death. Indeed, such a treated animal withstands any method of virulent anthrax inoculation, and has, therefore, acquired a solid immunity. This experiment in the rabbit gives similar results. A similar immunity may be set up by the intradermic infection *i.e.*, into the skin itself.

Besredka proved that the immunity set up by cutaneous vaccination is not due to the production of specific antebodies in the blood, since the serum of such immunised bodies is not protective. He thought that in the guinea-pig there is only one organ for which the anthrax bacillus has a real affinity, and in which it can establish itself and multiply, this organ being the skin, outside of which it is destroyed wherever it enters the body.

A guinea-pig inoculated with anthrax intra-peritoneally or intra-tracheally succumbs, in the same manner as one inoculated cutaneously or subcutaneously, but Besredka considered that this is because, when inserting and withdrawing the needle, one is sure to wound the skin and infect it with the bacillus, and it is the infection of the skin which determines the death of the animal. Besredka successfully injected guinea-pigs with many times the ordinary fatal dose of anthrax, into the trachea, peritoneum, and veins, without causing these animals any inconvenience. The author found the operation a delicate one and did not always succeed, and says that any œdema appearing at the point of inoculation is an indication of faulty technique.

The results show that the susceptibility of the guinea-pig is chiefly, if not entirely, confined to the skin. It is, therefore, easy to understand how the animal which has been vaccinated cutaneously shows such powerful immunity. It shows, also, how a local immunisation, confined to the skin alone, and not due to the development of antibodies in the blood, can confer an immunity on the whole animal body. It is because the guinea-pig possesses but one sensitive organ, the skin, and as soon as this has been immunised the animal is totally resistant. In whatever way the virus be subsequently introduced, it is opposed firstly by the barrier of the vaccinated skin, and secondly by the natural refractory state of the other organs. Further, a guinea-pig inoculated successfully intra-peritoneally or intra-tracheally, does not develop any immunity.

It is now seen that the guinea-pig is very resistant to anthrax provided the organism is not introduced into the skin, and, moreover, immunisation is easy if care be taken to vaccinate the skin.

The author conludes by saying that an endeavour should be made to determine whether an animal possesses an organ particularly sensitive to the infecting agent, and, if so, whether by vaccinating that organ the animal may not be completely immunised.

Since Besredka's publication, a good deal of work on cutaneous infection and vaccination has been carried out. It would appear, on the whole, that Besredka's idea of cutaneous immunity has been confirmed, but that other organs and tissues can be infected if the dose of virus be sufficient.

Several investigators have ascribed the susceptibility of the skin to the small resistance it offers physiologically to the introduction of bacteria. Gratia thinks that if anti-anthrax vaccination is actually more effective by the cutaneous than by the subcutaneous path it is because, the skin being more favourable to the multiplication of the organisms, allows the vaccines introduced to exercise their aggressive powers, and the animal responds with anti-aggressins, which are the real protective substances.

Singer also suggested this aggressin theory as an explanation, while Woolman says that the skin and internal organs are equally susceptible after aggressin injection. An experiment by Gratia shows that the inoculation of sterile broth into the skin reduces its susceptibility to anthrax, by reason of the leucocytosis it provokes. Another experiment by Holman suggests that subcutaneous inoculation into the ears of guinea-pigs is more likely to be fatal than subcutaneous inoculation on the abdomen, and infers that the small amount of reaction in the ear is due to lack of phagocytosis at that part, and subsequent fatal infection.

Combiesco considers that the skin, in anthrax infection, plays a mechanical part, in that phagocytary reaction is prolonged and the bacteria encapsule themselves, as becoming more resistant to phagocytosis, and infection and death result.

Whether the skin is actually more susceptible to infection with the anthrax organism than any other organ or tissue, or whether by reason of its histological structure and physiological actions it offers less resistance to development of the infecting agent, remains to be proved.

As a result of Besredka's work, immunisation of domestic animals is being attempted in some countries by intra-dermal inoculation. Vallée considers that he has established that the bovine is as susceptible to intra-cutaneous inoculation as is the guinea-pig.

Monod and Velu, in Morocco, have applied the method in 14,500 cattle, 2,500 sheep, 4,600 pigs and 75 horses, and claim good results, while several other experimenters claim similar satisfactory results, in the same species of animals.

Besredka's work opens up problems, not only of vaccination and immunity, but also those of infection.

(To be Continued).

FRESH MILK.

In pursuance of the notice given on July 21st of his intention to alter the description of the milk distributive trade for the purposes of the Trade Boards Acts, the Minister of Labour has made a Special Order dated December 4th providing that the expression "fresh milk" in the 1920 Order shall include sterilised milk, and adding the processes of sterilising and homogenizing to the operations specified in that Order. Copies of the Special Order, which may be cited as the "Trade Boards (Milk Distributive) Order, 1926," may be obtained from the Stationery Office or through any bookseller, price 1d.

The Veterinary Record.

18th December, 1926.

COMPARATIVE MEDICINE IN THE PROVINCES.

We note in the report of the Royal Counties Veterinary Medical Association's meeting published in this issue, that an invitation was received from the Secretary of the Guildford Division of the Surrey Branch of the British Medical Association. This invitation was not merely for the members of the R.C.V.M.A. to attend the meeting of the Surrey Branch of the B.M.A., but the request was made that the R.C.V.M.A. would nominate someone to read a paper on a subject of common interest to the medical profession.

This is the first occasion upon which the R.C.V.M.A. has received an invitation of such a character and we feel that we cannot allow the event to pass without comment. In the past it has been customary to invite the M.O.H. or a medical practitioner living in the town in which veterinary meetings of Divisions of the N.V.M.A. have been held, but little has been attempted on a larger scale by the Divisions.

On behalf of the profession, we most heartily welcome this further step towards the closer co-operation of the work of the sister professions.

The Comparative Section of the Royal Society of Medicine was the primary factor to this end, and the good that that body has done and is doing is enormous, but it is only natural that its effect has been chiefly felt at its headquarters in London.

The time is now ripe when "Comparative Sectional Meetings" could be arranged in the provinces by Divisions of the B.M.A. and N.V.M.A., and we note with pleasure that an important step in this direction has been taken by the introduction into next year's B.M.A. Congress programme at Edinburgh, of a Section of Comparative Medicine, under the Presidency of Dr. O. Charnock Bradley.

These meetings need not be held frequently—say, once yearly, to start with—and the expenses of the meetings could be borne by the Associations or Divisions represented. Now that the ball has been set rolling, let not the blame of it stopping rest on our shoulders, but rather let us see to it that we use all our available strength to accelerate the pace. We would venture to throw out the suggestion to the energetic Presidents and Secretaries of the Divisions of the N.V.M.A., that they should approach the officials of the local branches or Divisions of the B.M.A. with a view to co-operating in the holding of joint meetings.

One or two of the Divisions of the N.V.M.A. already hold such meetings, but it is our opinion that *all* Divisions should participate in this forward movement.

We feel confident that our medical confrères would welcome this suggestion, but at the moment there is a lack of initiative for putting it into practice.

This is, after all, a simple matter to overcome, if only the necessary energy is used, and we feel certain this is possessed by the Secretaries and officials of our local Divisions.

Milk and Dairies Order.

LORDS REJECT MOTION FOR ANNULMENT.

In the House of Lords, on Wednesday, December 8th, Lord Strachie moved that an humble address be presented to His Majesty praying that the Milk and Dairies Order, 1926, dated July 6th, 1926, be annulled. He believed that out of the 33 articles of which the Order was composed many were most necessary, but to three of the articles he wished to take serious objection. It was absolutely necessary to see that a supply of clean milk was provided in this country, but what he objected to was the enormous expense put on owners by certain articles in the Order.

The cost of carrying out the prescribed regulations was estimated by the Ministry of Agriculture to be £2 a cow, but the Somerset County Council were of opinion that the cost would be £5. Owner-occupiers would be particularly hard hit. The Order would place farmers at the mercy of groups of fanatics of urban and rural district councils. Mr. Chamberlain and Mr. Guinness, the Ministers who were responsible for the Order, had found it necessary to issue a circular to urge restraint in the administration of the regulations. He suggested that the circular should be withdrawn and the Order modified in accordance with the terms of the circular.

Lord Banbury said that at this moment, when everything was as bad as it could be in regard to trade and agriculture, the Government ought to let the milk industry the only bright spot in agriculture, alone.

Lord Bledisloe, Parliamentary Secretary to the Ministry of Agriculture, said that other countries were far ahead of us in the matter of protecting the health of the community against the injurious effects of polluted milk. The consumption per head of milk in this country was smaller than that of any other highly civilized country in Europe, and the health of the nation, and particularly of its children, was suffering in consequence. The statements of enthusiasts and extremists that there was poison in the milk pail—statements which he thought had been exaggerated—had acted as a serious deterrent to the consumption of milk among the poorer population. The reason why farmers had not been able to make sufficiently good milk contracts was that there was a surplus of milk production at the present time; to some extent that was due to the fact that the milk supply was not all they would like to see it in this country. If milk producers made some reasonable concession to enlightened public opinion the demand for milk would increase, and dairy farmers would become more prosperous. The Ministry of Agriculture and the Ministry of Health had been in amicable conference in arriving at the final form of this Order. If orders had already been made by certain local authorities in Devon of a drastic character they were *ultra vires* and would be discountenanced by the Ministry of Health. He hoped when the circular was issued which it was intended to send out shortly there would be no recurrence of such uncalled-for action. The Ministry of Health had not the smallest intention to be drastic in administering the Order, but they wished to keep reasonable pace with the public demand for a pure milk supply.

The motion was defeated by 64 votes to 21—majority, 43.

PERSONAL.—Captain J. M. Culhane, M.R.C.V.S., has arrived home on leave from Nyasaland.

CLINICAL AND CASE REPORTS.

An Undiagnosed Case.

By Major A. A. PRYER, R.A.V.C., Edinburgh.

Subject.—A field artillery draught gelding, aged 17 years, but in good condition, and showing little sign of wear.

History.—On the morning of the 27th September, 1926, the animal slipped its head-collar, escaped from the stable and galloped across the barrack square. In attempting to avoid a water trough, it fell down on its near side. It rose at once and was secured. Examination failed to reveal any injury, except the removal of a few hairs from the outer surface of the near hock, and the animal performed its work in a normal manner on the following day.

Case Report.—At 7 p.m. next evening (28-9-26), the stable picquet noticed a steady stream of blood issuing from both nostrils. The animal was removed to the sick lines, and after examining it the orderly farrier telephoned me to the following effect:—

"Profuse hæmorrhage from both nostrils. Extensive swelling as hard as a board developing rapidly all down the under surface of the throat and neck. Muzzle protruded and elevated. Breathing becoming more distressed every minute. Temperature 100·4°F."

I hurried to barracks and found, on arrival, that the electric lamps in the sick lines had fused, rendering it necessary to conduct operations by the light of a candle. The farrier's description of the case proved accurate, but the symptoms had become intensified in the interval. The animal was now staggering round the box in delirium, and death from asphyxia appeared imminent. The need for instant tracheotomy was obvious, but since I was unaware of the history of the fall on the previous day, the possibility of anthrax loomed large for the moment. I decided to take the risk, however, and seizing a scalpel made a longitudinal incision into the trachea, through the 9th, 10th and 11th tracheal rings. I selected the low operation site on account of the more extensive swelling higher up the neck.

At this juncture, and before I could insert a tracheotomy tube, the animal plunged wildly, knocking over the man who was holding the candle, and fell to the ground. Its struggles continued for a few moments, after which it remained still.

The candle having been re-lighted, my assistants said with one accord, "Too late, he is dead." Examination of the pulse, however, revealed that although it was slow and laboured, it was of good volume. After about a minute respiration was resumed and improved with every breath, and after ten minutes the epistaxis ceased and the patient resumed the standing position, greatly relieved. I inserted a tracheotomy tube and, having issued such instructions as would minimise the spread of infection in the event of the case proving to be one of anthrax, I left for the night. Next morning the animal was cold and tucked up, but breathing comfortably.

I took blood smears from a superficial vein and sent them to Professor Matheson, F.R.C.V.S., D.V.S.M., of the Royal (Dick) Veterinary College, who courteously examined them and reported them free from *B. anthracis* and the bacillus of malignant œdema.

Although this did not eliminate the possibility of anthrax, I felt justified in proceeding to further treatment in the form of liberal hot fomentations to the swollen throat. The patient was well hand-rubbed and clothed, and bandaged warmly.

The operation wound was treated in the usual manner, but on the eighth day I had to remove some gangrenous portions of muscle. These, I think, were due to pressure, the only tracheotomy tube available being on the short side, while the tissues of the neck remained swollen. All traces of the swelling had disappeared by the tenth day, and on the twelfth day I removed the tube and allowed the wound to heal.

The patient was discharged to light duty on the 22nd day. It is now in regular work, and the only remaining ill-effect is an occasional cough. I do not know whether this is due to mere irritability of the tracheal mucosa or whether some stenosis will supervene.

Remarks.—I am not recording this case on account of its fortunate termination, but because I am unable to form a diagnosis. I am still wondering whether the condition was a sequel to the fall on the previous day. If so, what structures were injured to account for the subsequent train of symptoms? If the condition was not associated with the fall, to what was it due? Frankly, I do not know. Perhaps some brother practitioner can enlighten me.

A Peculiar Dog Complaint.

By J. J. Collins, M.R.C.V.S., Bowdon.

My object in writing this note is to draw the attention of the members of the profession interested in canine practice to a condition, met with in dogs here, which is known locally as fits, hysteria, and "going mad." I have only met with this trouble in dogs in Cheshire (which may be merely a coincidence), and the first case I had was some eight months ago. Since then, I have had, on an average, about one case a week, all presenting approximately the same symptoms, and up to the present, as far as I am aware, all recovering without a recurrence of the trouble.

I have found this condition affecting both sexes of the following breeds:—Alsatians, Airedales, Fox Terriers, Spaniels and Labradors, roughly between the ages of six and eighteen months. The symptoms resemble those described in text books for active cerebral congestion. The dog, without showing any noticeable previous indisposition, will suddenly whine, look terrified, and, after a second or two, start rushing about howling as he goes, as if trying to flee and hide from an unseen enemy. He will dash into the nearest obstacle, only to rush on again and continue in his mad career until exhaustion finally compels him to come to rest—generally in the most inaccessible place he can find. The attack lasts only a few seconds in some cases; in others, several minutes, during which time the animal fails to recognise his master, often defæcates freely and will salivate, but there is no chattering of the jaws, or showing of the teeth as in the nervous convulsions of distemper. Immediately after an attack the respirations are greatly increased, pulse rapid, pupils dilated, and the temperature is variable. When an attack is over, the animal gradually resumes his normal life again, until the next attack, which, not uncommonly, comes on about the same time the next day. The trouble is apparently not contagious, as I have often admitted dogs to the infirmary with these attacks, and have never had a case with the contemporary boarders, although I have seen a Fox Terrier dog and bitch affected in exactly the same way at different times in the same house.

My present opinion is that the trouble is due to an acute form of indigestion, with colic as the exciting cause.

As to treatment, I simply give the dog a laxative, followed by a twenty-four hours' fast, and then a very light, easily-digested diet for about a fortnight, keeping him shut up in a quiet kennel or loose box the while. I have found that a temporary complete change of surroundings (as, for instance, when I admit the animal to the infirmary), coupled, in most cases, with a permanent change of diet, to be a successful method of combating these attacks.

Will a Dog breed to a Wolf?

"We have just had the question asked us about the crossing of a wolf to a Collie. If this cross is made, will the offspring be hybrids or not? We shall appreciate an answer to this question as soon as possible," say *O. R. E. and R. G. I., Alabama*, in the *North American Veterinarian*, of September, 1926. The Editor's reply is as follows:—

"As the wolf belongs to a different species of the *Genus canis* than that of the domestic dog, the offspring from a cross would be hybrids.

"It is, however, unlikely that these two species will cross. We know of no authentic record of such a cross except the incident related in the dog number of *The National Geographic Magazine* (1919) wherein a predatory animal accidentally trapped is described as a wolf whose coat resembled that of a Collie dog. The author thought the animal was a hybrid resulting from the breeding of a wolf to a domestic dog, but his suspicion lacks confirmation.

"From the fact that there are large bands of different species of wolves and large bands of different species of wild dogs still roaming about in many parts of the world and that these are by no means segregated from one another or from stray domestic dogs, it would seem that if these groups inter-bred at all, many new species or many hybrids would have resulted. As is well-known, this has not happened. The short-sighted anti-evolutionists, who do not see beyond the end of their noses, use this as a text for one of their sermons."

DIVISIONAL REPORTS

Royal Counties' Division.

MEETING AT RED LION SQUARE.

A well-varied programme, which included the election of officers for the ensuing year, attracted a good attendance at a meeting of the Royal Counties' Division, which was held at 10 Red Lion Square, London, on the afternoon of Friday, November 26th, 1926. The President, Mr. F. T. Trewin, occupied the Chair and there were also present Messrs. J. R. Baxter, H. Bell, J. Bell, Captain H. S. A. Dunn, Mr. J. R. Hewer, Major F. T. G. Hobday, Messrs. T. M. C. Hunt, and H. G. Lepper, Captain W. L. Little, Messrs. G. P. Male, J. W. McIntosh, B. A. McGuire, Major G. Rees-Mogg, Lt.-Col. P. J. Simpson, Major F. J. Taylor, Major R. C. Tennant, Messrs. F. W. Willett, and J. Willett, Captain S. Villar, Mr. E. Wilkinson, and Major R. Catmur (Hon. Secretary). *Visitors.*—Messrs. Cyril Elphicke, C. J. M. Godfrey, L. B. A. Grace, and Major-General Sir John Moore.

The *minutes* of the previous meeting of the Division, which had been published in the *Record*, were taken as read and were signed as correct.

CORRESPONDENCE.

(1) Letters of apology for unavoidable absence were sent by Messrs. Addis, Austin, Baxter (A. J.), Bullen, Professor Buxton, Major Dunkin, Col. Jelbart, and Messrs. McKerlie, and S. H. Slocock.

(2) From Mr. J. H. Shepherd, of Guildford, enclosing the following letter received by him from the Hon. Secretary of the Guildford Division of the Surrey Branch of the British Medical Association.

"BRIDGE ROAD,
GODALMING.

"Dear Sir,

"At a meeting of the Guildford Division of the Surrey Branch of the British Medical Association, it was proposed that the local Veterinary Society be asked if one of their members would give an address on some subject common to both veterinary and medical practice. This address might be followed by a discussion.

"The Association would be extremely grateful if you could advise them as to any Veterinary Surgeon who would open the discussion and the names of those who would enjoy the subsequent talk.

"The meeting could be arranged for either the first or third Thursday in April, as you may desire. The Surrey County Hospital have kindly allowed the use of their board room. Tea is usually served at 4 o'clock, and is followed by the address and discussion. The subject is left to the discretion of the opener.

"As I do not know the address of the Secretary of the Veterinary Association of Surrey, I have ventured to apply to you for your advice.

"Yours sincerely,
F. K. TOMLINSON,
Hon. Secretary,
Guildford Division, Surrey Branch B.M.A."

THE PRESIDENT: I think it is very gratifying to receive this invitation from the Guildford Division of the Surrey Branch of the British Medical Association, and it is an opportunity such as we have been wishing for of getting a closer degree of co-operation between the Medical Profession and our own. Personally, I think it is an opportunity that we should make every endeavour to take (hear, hear), and that we should appoint someone (possibly our incoming President, if we can persuade him to do so) to give a paper. In any case, I should like to hear your views on this matter.

LT.-COL. SIMPSON: I think that this is an extremely important item on our agenda to-day. I do not think that this Society has ever been asked previously to co-operate in this manner with the Medical Profession. We have in the past asked doctors to attend our meetings, but we have never had the invitation reversed. We have now been asked to take part in their discussions, and I am sure that all in this room will give this subject their earnest consideration. I trust the meeting will fall in with the suggestion that the invitation be accepted. You, Sir, mentioned that possibly the incoming President might be approached on the subject of the provision of the paper; you had in your mind the recommendation made at the meeting of the Council of the Society which preceded this gathering and, in view of this matter having arisen, perhaps I may be permitted to divulge the fact that the name of Professor Buxton is that put forward by your Council as the next holder of the office of President. (Applause). It was Professor Buxton to whom you were referring as a very suitable member to attend that combined meeting and to read a paper there. I move that this Society accepts with very great pleasure the kind invitation of the Secretary of the Guildford Division of the Surrey Branch of the British Medical Association to attend their meeting in April.

Mr. J. WILLETT seconded the proposition.

The meeting accorded its enthusiastic assent to the proposal and appointed the President, the President-elect, the Hon. Secretary, and Hon. Treasurer as a committee to make the necessary arrangements.

Nomination to Membership.—Mr. MCINTOSH: We have with us to-day a very distinguished member of the profession in the person of Major-General Sir John Moore and I am going to take this opportunity of proposing him as a member. He would be a distinct acquisition to us if he wou'd accept membership. (App'ause). The proposal having been seconded by Major HOBDAY, SIR JOHN MOORE said: I must thank you for your invitation to attend your meeting here to-day, but I did not expect that Mr. McIntosh was going to take the opportunity to invite me to join your ranks. One does not like to be a member of too many societies, but I cannot refrain from yielding to the gentle pressure which Mr. McIntosh has put upon me, and I shall be delighted to become a member.

The PRESIDENT: I am sure that the Society receives Sir John Moore's decision with very great pleasure. (Applause.)

Membership elections.—The following gentlemen were unanimously elected as members of the Division: Mr. C. J. N. Godfrey, of Oxford (Proposer, Major Catmur; Seconder, The President), and Captain A. Barr, of Watford (Proposer, Major Catmur; Seconder, Captain Collett).

ELECTION OF OFFICERS.

The PRESIDENT: I think it is generally accepted that it is the privilege of the retiring President to nominate his successor; I have very great pleasure in nominating a gentleman who occupies a very distinguished position in our profession, who is also one of the most popular amongst its members and who is extremely well known amongst them—I refer to Professor Buxton. (Applause). Professor Buxton's abilities and qualifications are so familiar to you all that it is quite unnecessary for me to go into details about them. I am sure that we are extremely grateful to him for the interest which he—busy man as he is—has for so long taken and still takes in this Society. In honouring him by proposing him as our President, I am sure that we are honouring ourselves and I have, therefore, the very greatest pleasure in proposing that Professor Buxton be elected our President for the ensuing year. (Applause.)

Mr. MALE having seconded the proposition, the following telegram from Professor Buxton was read: "Letter only just received. If elected would deeply appreciate the honour. Regret unable to reach London in time to attend meeting." The election was made amid acclamation.

Vice-Presidents.—Mr. Trewin (retiring President), Mr. Hewer (elected), Captain Little, and Major Rees-Mogg.

Hon. Auditor.—Mr. J. Willett (re-elected).

Hon. Secretary.—Mr. Robin Catmur (re-elected).

Hon. Treasurer.—Mr. G. P. Male (re-elected).

Next Meeting.—It was agreed that the next meeting of the Division (the annual meeting), to be followed by the annual dinner, be held at Reading and that the President and Secretary of the Guildford Division of the Surrey Branch of the B.M.A., together with Mr. Shepherd, be invited to attend the annual dinner as the guests of the Society. It was left to the officers to make the necessary arrangements for the meeting and dinner.

POST-MORTEM SPECIMENS AND CASES OF INTEREST.

Mr. F. W. WILLETT: I have just been reminded by my assistant, Mr. Grace, of the specimen which I have now the pleasure of bringing to your notice. This calculus (produced) was associated with a case in a Fox terrier bitch which had been brought to me for urinary trouble. On examination I was able to detect the presence of the calculus and I advised the owner that an operation would be necessary, at the same time making her acquainted with the risk.

We kept the bitch for a day or two, preparing her for the operation, then we chloroformed her, but I may say that she succumbed under the anæsthetic. We removed the calculus and I brought it along, because I have never seen such a large one in a bitch before, and I thought it might be of interest. I understand that the bitch had, about eighteen months ago, been treated by another veterinary surgeon for urinary trouble.

Mr. J. WILLETT: I have not a morbid specimen to show you, but I would like to relate a little experience of mine that led me into a serious error early in the year. I was called to examine a polo pony at one of the repositories, and I found a cataract in the off eye. I notified the man who asked me to examine the animal, which was warranted as a polo pony. I told him that, if he had bought the animal, he should return it as not answering warranty. I went to Ranelagh two days afterwards and I met him there, when he said: "That pony is a whistler, too." I told him that I did not examine the pony for that, and then he said "You are sure he has a cataract?—They have just rung up from the repository to say that they cannot detect it." I went along there, and had the pony brought out. It was then 6-30 in the evening. I could not find the cataract, so I put him in another position in another box, but still I could discern nothing. They galloped him for his wind and then I could see the cataract, which was situated on the outer edge of the pupil. At that time of the evening, when it was getting dark, the pupil was partially contracted and I could not see the cataract in the box, but the subsequent galloping dilated the pupil and then the defect became easily visible.

We always examine animals when they come out of the stable and I can quite see that it is easy to be led into error in this way, and this is a point which might be borne in mind by many practitioners, especially the younger members of the profession. Since the episode I have related, I have always—and shall always in future—examine the eyes after the animal has been galloped.

Mr. HEWER: I should like to bring up something of the same sort. I was called to examine a polo pony, and on examining the eyes in the ordinary way, looking forwards, the left eye was apparently quite all right, but there was something about the right eye that made me look from the front, backwards, and then I could see a white spot. When I re-examined the other in the same manner, I could see the same thing there. I told the owner that the pony had something in the eyes, but I was told that was nonsense. We changed him into another box and it was still there. There was nothing to be seen from the back forward; it was only observable on looking from the reverse direction. After a lot of fiddling about the owner also saw it in one eye. Had it not been for some peculiar look about the lens I should not have taken a second look at the pony.

Mr. MCINTOSH: I think, in connection with Mr. Willett's case, that the matter can be explained in another way. How long does it take for a cataract to form? Is it not possible to examine a horse one week

and find no cataract, but to find one on examination a week later: it depends on the stage of the cataract's formation. It must have a commencement. I do not think, therefore, that our friend Mr. Willett need take any alarm on that head; if one has taken every care in the examination one may rest perfectly satisfied with it.

Mr. WILLETT: I agree with Mr. McIntosh, but my point is that I saw it once and then could not find it after. If I had failed to see it once and then found it after, it might have been another matter.

Mr. MALE: I was very interested in Mr. Fred Willett's calculus from the bitch, because I have been struck by the very few symptoms some bitches show when they have a large calculus present in the bladder. Even with very careful watching, they often seem to show no symptoms except that they urinate rather frequently, then they may suddenly develop the alarming symptoms of uræmic poisoning, when the case nearly always terminates fatally. They should be operated upon before this develops.

Major TENNANT: With reference to the calculus, I remember a case of bladder trouble which occurred some twelve years ago in a bitch belonging to a lady at Ascot. The animal used to run along the path frequently passing a few drops of urine, and that went on for five months. I told the owner that the bitch had a septic condition of the bladder, because the urine stank, and that I suspected a calculus. Eventually I destroyed the animal—she was 10 years old—and took the bladder out. There was an enormous calculus in it—quite twice the size of that shown here to-day—and the bladder wall was as thin as tissue paper. With regard to cataract, I "spun" a horse in Dublin with cataract in both eyes, right in the centre of the lens. The horse was poor and very weak, and was bought for £15. I saw the animal five months afterwards, when in good condition, and his eyes were quite clear—it was a case of debility cataract.

Major HOBDAY: The largest calculus I have seen removed from the bladder of a bitch weighed about six ounces. This one is comparatively of an ordinary size, though it is certainly more ragged on the exterior than is usual. The occurrence of these cystic calculi is extraordinarily common. In our hospital, my partner and myself have an average of thirty to forty cases of this nature every year—and it is most frequently met with in the sedentary breeds. particularly in the "Pekes." There are two points of real interest to us in these cases, because abdominal surgery is practised by every veterinary surgeon nowadays. One is the rarity of the occurrence of peritonitis following the performance of the operation for the removal of calculi—in fact it constitutes one of the safest of our abdominal operations on the bitch and dog. One achieves primary union in 100 per cent. of cases, although one has opened the skin, the abdomen and the mucous membrane of the bladder. The other point that experience has taught me is that it is unnecessary to use chloroform for these operations—I have not done so for years. One gives a dose of morphia and waits for half an hour, and hour, or an hour and a half—as one wishes—and then employs a local anæsthetic, of which I think Waite's is undoubtedly the best. We have performed two of these operations in the last ten days. One can perform the operation absolutely painlessly and almost without movement. Another feature in connection with this cystic operation is, unfortunately, the rapidity with which the calculi reform in these cases. Only the day before yesterday I had an instance of this in a Spaniel bitch. She was operated upon for cystic calculi five months previously, and on this second occasion I found two large calculi—one as large and the other half the size of that which has been shown here to-day, whilst the bladder was absolutely filled with other calculi of a small size: my partner, Mr. Stainton, and I counted 120 and then refused to count any longer. This case was exceptionally interesting to us because we looked carefully all over the bladder and could not trace any scar of the previous operation. This bitch was operated upon with a local anæsthetic.

The PRESIDENT: I am sure we are very grateful to those gentlemen who have brought forward these cases and the specimen, and I would like to propose a hearty vote of thanks to them for their kindness. The meeting accorded the vote with acclamation.

ANY OTHER BUSINESS.

The PRESIDENT: I would like here to make some reference to the Jubilee Congress of the Royal Sanitary Institute, held in London in July, which I attended as a delegate on behalf of this Division.

The Inaugural address by the President of the Congress—the Rt. Hon. Neville Chamberlain—Minister of Health—was an interesting review of sanitation and its progress during the last fifty years.

In the Veterinary Section, which was presided over by Alderman Phené Neal, who is held in high esteem by our profession, interesting papers were read by Col. Dunlop Young on "The Work of the Veterinary Officer from the Pampas of Argentina to Smithfield Market," and by Professor Buxton on "Some Notes on the Double Intradermal Tuberculin Test in Cattle and the Potency of Tuberculin."

The meetings were well attended and good discussions followed. As these have already appeared in the *Veterinary Record*, I will not describe them in detail.

The social functions were most enjoyable.

I should like to thank you, gentlemen, for the privilege and pleasure I had in attending this congress.

On the proposition of Mr. MALE, seconded by Col. DUNLOP YOUNG, Mr. Trewin was cordially thanked for his attendance at the Congress and for his report.

The PRESIDENT: The Secretary has just reminded me that Mr. Broad, a very respected member of this Society is unable to be with us to-day as he is suffering from the effects of a stroke of some kind, and I should like to propose that our Secretary be instructed to write him a letter, expressing our sympathy and our hope that he will soon be restored to his usual health.

Mr. HEWER, in seconding, informed the meeting that he had recently called on Mr. Broad, and he

was glad to say that there was a very great improvement in his condition. (Applause).

Mr. McINTOSH: There is one rather important item, which is not on the agenda, and that is to propose to our retiring President a very hearty vote of thanks for his conduct in the Chair during the past year. I am sure it has given Mr. Trewin as much pleasure to preside over our deliberations during the year as it has given us to support him in it, so successful and interesting have our meetings been during his occupancy of the chair. (Hear, hear). Those of us who visited him at his own home at Watford, on the occasion of our Summer meeting must ever remember with gratitude the great welcome accorded the members of the Society by Mr. and Mrs. Trewin; the very generous hospitality they extended to us and the truly delightful day they gave us.

The meeting accorded the vote with enthusiasm.

Mr. TREWIN: I must thank you very much for the very kind way in which you, Mr. McIntosh, have proposed this vote of thanks and in which the meeting has accorded it. I can assure you that my year as your President has been a very pleasant one indeed. I would like to acknowledge the great help which I have received from my friend, Major Catmur and from the other gentlemen who are holding office and also from you other gentlemen who have so ably and loyally supported me. I shall always look upon the past year as a very pleasant period in my life. (Applause.)

At the couclusion of the business on the agenda, Lt.-Col. T. Dunlop Young gave a demonstration on meat inspection, with specimens, which proved of the greatest interest and value to the members. Col. Young was accorded the best thanks of the meeting for his informative demonstration.

R. CATMUR,
Hon. Secretary.

Lancashire Division.*

MEETING AT LIVERPOOL.

A general meeting of this Division was held at the Exchange Hotel, Liverpool, on Friday, September 24th, 1926, at 3 p.m. The Chair was occupied by the President, Mr. J. Holroyd, and others present were Messrs. J. D. Whitehead, P. T. Lindsay, O. A. Ducksbury, J. K. Bateman, J. N. J. Hagan, J. A. Powley, T. Millington, H. H. Aldred, H. T. Matthews, A. W. Noel Pillers, G. Mayall, F. A. Ball, L. A. Watson, F. Hopkin, W. Ackroyd, H. L. Torrance, H. Sumner, senr., W. Fowle, J. W. Procter, G. C. Lancaster, J. Spruell, Professor Gaiger, Mr. J. White and Dr. T. Hare. *Visitors.*—Messrs. W. Tweed and T. D. Lloyd-Jones.

Apologies for unavoidable absence were received from Messrs. Slinn, Curbishley, Eaton Jones, Burndred, Brittlebank, Allen, Oddy, Wright, Woods, Edwards and McKinna.

* Received on November 2nd.

The minutes of the last meeting were taken as read and were confirmed.

Obituary.—The PRESIDENT proposed a vote of condolence with the relatives of the late Mr. Norman Woolley, who, as all the members present would be aware, had met with a fatal accident since the previous meeting.

Mr. PILLERS seconded this proposal and it was passed in silence, with the members standing.

R.C.V.S. President.—The PRESIDENT said that, as no doubt all would know, Colonel Brittlebank, a member of that Division, had been elected President of the Council of the Royal College of Veterinary Surgeons, and he thought that it was only fitting that they should place on record their appreciation of the services rendered by that gentleman to the profession in general and to that Division.

Mr. HOPKIN proposed, and the PRESIDENT seconded, and it was carried unanimously, that this Association send their congratulations to Colonel Brittlebank on his election as President of the Royal College of Veterinary Surgeons, and that their appreciation of his services to the profession in general and to that Division be placed on record.

Resignations.—The SECRETARY reported that he had received letters from Messrs. Woodhead and P. W. Walker resigning their memberships of the Association, as they had removed from the district.

Mr. PILLERS proposed, Mr. WHITEHEAD seconded, and it was carried, that these resignations be accepted with regret.

Correspondence.—(1) Regarding a sanitary inspector taking special samples of milk from cows suspected to be suffering from tuberculosis of the udder and giving twelve addresses of farms where this had taken place.

Mr. LINDSAY proposed, Mr. WOOD seconded, and it was carried that the correspondence be referred to the Council of the Division, with power to take what action they might consider necessary.

(2) A letter from Mr. Rogers accompanying an extract from the *Bootle Times* regarding the proposal of opening an Animal Sanctuary in Bootle and one in Seaforth.

Mr. SUMNER carefully explained the attitude of the Council of the Royal College to these philanthropic clinics, and he proposed that the Royal College be asked if they approve of this scheme, and, if not, that a reply to that effect be sent to the Mayor of Bootle.

This was seconded by Mr. PILLERS and carried.

The Movement of Dressed Carcases from Foot-and-Mouth Infected Places to Markets in Free Areas.—A discussion on this subject was opened by Mr. WHITEHEAD and many members participated.

It was resolved that the following resolution be sent to the National Veterinary Medical Association:

"That this meeting agrees with the Ministry with regard to the danger of sending carcases from Foot-and-mouth infected places into other areas, and urges upon the M nistry the necessity for the adoption of every possible preventive measure against

the risk of infection, not only from abroad, but from its own actions."

The Duties and Responsibilities of the Veterinary Surgeon under the Milk and Dairies (Consolidation) Act, 1915, and Orders.—A discussion on this subject was opened by Mr. PILLERS. He urged the veterinary inspectors to combine and to study these Acts and Orders, and formulate a scheme whereby the work might be systematically carried out in each county or district. Amongst others, Messrs. WOOD, TWEED, ALDRED and HOLROYD took part in the discussion.

JOHN SPRUELL,
Hon. Secretary.

Dumfries and Galloway Division.*

MEETING AT ANNAN.

A meeting of the above Division of the N.V.M.A. was held in Annan, on October 26th, 1926, when the following were present: The President (Jas. Waddell, Castle Douglas), Messrs. J. G. Bell (Carlisle), J. Lindsay (Dumfries), N. H. MacAlister (Kirkcudbright), A. J. Milligan (Annan), D. G. Wishart (Lockerbie), F. Croudace (Corbridge-on-Tyne), W. T. Hewetson (Brampton), R. Craig-Robinson (Carlisle), and A. Young (Dumfries), Secretary. *Visitors*: Major A. Robb (Glasgow), D. B. Rodger (Ministry of Agriculture), R. J. Little (Carlisle), and F. A. Davidson (Dumfries).

The company assembled at Messrs. Kirkpatrick's Mart, where Mr. Milligan had procured, for the operation, a "roarer." Major A. Robb was the operator, and after the subject—a hunter—had been cast and chloroformed, the Major proceeded with the operation, which he performed in a very neat and expeditious manner, removing the lining of the ventricles with the aid of the "burr," which method the operator favours. The whole proceeding was watched with great interest, the operator lucidly explaining each step in the operation as performed.

The next item on the demonstration programme was the caponising of cockerels by Mr. F. Croudace. The operator was somewhat handicapped, in that the subjects had not been fasted, and consequently the testicles were somewhat difficult to find. However, with perseverance, the operation was successfully accomplished, and was much appreciated. The company then proceeded to the Queensberry Hotel, where luncheon was taken, after which the Annual General Meeting was held.

The President (Jas. Waddell) occupied the Chair. An apology was read from Mr. A. Edgar (Whithorn) regretting that he would not be able to attend, but wishing the Division a very successful meeting.

The PRESIDENT proposed votes of thanks to Major Robb, for so kindly coming to the meeting and giving the surgical demonstration which they had all witnessed with such pleasure and, he hoped, profit; Mr. Croudace, for his demonstration; Messrs. Kirkpatrick, for so kindly placing their Mart at the disposal of the Division for the demonstrations, and Mr. Milligan, for having procured the subjects and arranged all the details in connection with the demonstrations. All these proposals from the Chair were seconded and carried unanimously.

* Received on November 9th.

ELECTION OF OFFICERS.

The CHAIRMAN proposed that Mr. J. G. Bell (Vice-President) be elected President for the coming year.

Mr. MILLIGAN seconded, and no other name being put forward, the proposition was carried unanimously.

Mr. R. C. Robinson was elected as Vice-President.

Mr. MACALISTER proposed that the Hon. Secretary be re-appointed.

Mr. ROBINSON seconded, and this was agreed.

Messrs. Lindsay and Allan were re-appointed as Auditors.

Mr. WADDELL proposed that Major Robb be elected an honorary member of the Division.

Mr. LINDSAY seconded, and the proposition was carried, Major Robb making suitable acknowledgment.

New Members. The following were elected to membership: Mr. F. A. Davidson (Dumfries), Mr. R. J. Little (Carlisle), and Mr. G. D. W. Davidson (Castle Douglas).

Next Meeting. It was decided to hold the next meeting of the Division at Carlisle in the Spring.

A. YOUNG,
Hon. Secretary.

West of Scotland Division.*

MEETING AT GLASGOW.

A meeting of this Division was held in the Royal Hotel, Sauchiehall St., Glasgow, on Saturday, 16th October, at 4-30 p.m., with Dr. Whitehouse in the Chair. The following were also present:—Messrs. W. Robb, J. Macfarlane, C. A. McGaughey, Hugh Begg, Peter Wilson, D. Campbell, Jas. F. Taylor, Peter Meikle, D. Brown, W. Harley, A. Stark, A. Sillars, J. Andrew, and G. W. Weir, Hon. Secretary.

The minutes of the last meeting were taken as read and were approved of by the meeting.

Apologies for absence were received from Messrs. W. Ferguson, R. P. Dalgliesh, and R. Mitchell.

Mr. D. CAMPBELL (Rutherglen) introduced the subject of the position of the part-time veterinary inspector under the Milk and Dairies (Scotland) Act, 1914, and gave, in detail, all that had transpired, between a committee representing these inspectors and the N.V.M.A., and also between the N.V.M.A. and the Scottish Board of Health.

At this juncture tea was served, at which fourteen members were present, the meeting thereafter being resumed.

After a full discussion, in which most of those present took part, it was agreed unanimously, on the

* Received on November 1st.

motion of Mr. CAMPBELL, seconded by Mr. ROBB, that the following resolution be sent to the N.V.M.A. :

"That this Division considers the present position of part-time veterinary inspectors under the Milk and Dairies (Scotland) Act, 1914, as unsatisfactory and undignified, and urges the Council of the N.V.M.A. to re-open the subject with the Scottish Board of Health with a view to having the restriction on private practice which is imposed on these inspectors, withdrawn."

Dr. WHITEHOUSE intimated to those present that he wished to try, experimentally, informal meetings of veterinary surgeons, the meetings to be held at the Glasgow Veterinary College at an hour agreeable and convenient to the majority, these meetings to be informal and short discussions to take place on any subject interesting to practitioners. He then invited members and non-members of the Division, who could find it convenient to do so, to meet on Saturday, 30th October, in the Glasgow Veterinary College, at 7-30 p.m. Tea would be served and at this meeting all present would be guests of the President, Dr. Whitehouse.

New Members.—The following gentlemen were elected to membership of the Division :—Mr. Jas. F. Taylor (Cathkin), Mr. G. C. Inglis (Alloa), and Mr. W. Harley (Hamilton).

After a vote of thanks to the President, the meeting closed.

G. W. WEIR,
Hon. Secretary.

Western Counties Division.

AUTUMN MEETING AT ST. AUSTELL.

The autumn meeting of the Western Counties Division was held at the White Hart Hotel, St. Austell, Cornwall, on Wednesday, November 24th, 1926. In the absence of the President (Mr. A. G. Saunders, Taunton), Mr. C. Masson (Torquay), Vice-President, was voted to the Chair. He was supported by the following members :—Messrs. P. W. Bloye, C. Crowhurst, J. Dunstan, F. T. Harvey, S. J. Motton, W. L. Richardson, E. R. Smythe, R. H. Smythe, H. W. Townson, and R. Barons Nelder (Hon. Secretary).

The minutes of the last meeting, as published in the *Record*, were taken as read, and were confirmed and signed as correct.

Correspondence.—(1) Apologies for absence were announced from the following :—The President, Messrs. W. Ascott, J. C. Dyett, E. R. Edwards, J. Forbes, F. T. G. Hobday, W. H. James, W. B. Nelder, R. E. L. Penhale, W. Penhale, L. E. Perkins, W. Roach, E. J. Thorburn, and W. N. Wright.

(2) The Secretary reported the result of correspondence with reference to a statement in the *Girl Guide Gazette* in connection with the People's Dispensary for Sick Animals. The matter had been referred to the "National," who had written to the Editor of the *Gazette*, and it was understood that the error had since been corrected in that paper.

(3) A letter was received from Mr. C. Crowhurst calling attention to a circular issued by a firm offering free veterinary advice to their customers, which he thought was detrimental to the interests of the profession.

After a good deal of discussion, it was decided to take no action.

(4) The Secretary briefly referred to communications he had received from the "National" with reference to the formation of the Provisional Committee, and to the arrangements that were being made for the next Annual Congress, at Torquay, in 1927.

Nomination of New Member.—Mr. L. E. Perkins, Inspector of the Ministry of Agriculture, stationed at Truro, was nominated a member on the motion of Mr. S. J. MOTTON, seconded by the HON. SECRETARY.

Mr. S. J. MOTTON read a paper entitled "Lightning and Lightning Stroke," in which he dealt with the subject in a very thorough and efficient manner. The paper was followed with the deepest interest and provoked a good discussion. (The paper and discussion will receive separate publication later.)

The CHAIRMAN, in proposing a hearty vote of thanks to Mr. Motton, welcomed the paper as a valuable contribution to the study of the subject of Lightning and Lightning Stroke. This was seconded by Mr. HARVEY, and carried unanimously.

On the motion of Mr. BLOYE, seconded by Mr. E. R. SMYTHE, Mr. Masson was cordially thanked for his conduct in the Chair.

The members and their ladies were subsequently entertained to tea by Mr. and Mrs. H. W. Townson, who were accorded a very hearty vote of thanks for their kind hospitality.

R. BARONS NELDER,
Hon. Secretary.

Unqualified Castrator Fined.

At Greenwich Police Court recently, before Mr. Gattie, Albert Charles Standen, cat's meat dealer, 68 Dalmain Road, Forest Hill, was summoned at the instance of the R.S.P.C.A. for causing unnecessary suffering to two nine-weeks-old kittens by subjecting them to an operation without exercising due care and humanity.

In fining Standen 40s., with £5 5s. costs, Mr. Gattie said the point had been stressed that where it was necessary that an operation should be performed on an animal the proper person to perform it was a qualified veterinary surgeon. If an animal was to be operated on it was right that it should be sent to someone who had received training which would qualify him to perform it. These observations were directed not only to those who performed operations, but also to owners; the Act of Parliament provided punishment for the person who permitted cruelty to be caused. While it was perfectly competent for an unqualified person to perform an operation without causing unnecessary suffering to an animal, he must exercise the greatest possible care, because if anything went wrong it was at once put down to his want of skill. On the evidence he did not think he would be justified in concluding that the prosecution had made out a case from the point of view of the age of the kittens. As to the method in which the operation was performed, he found as a fact that a transverse incision was made, and such an incision would obviously take longer to heal than a longitudinal one. Such a mistake having been made, it would be imperative that the greatest care should be taken that the wound should not become infected after the operation. The manner in which the operation was performed was wrong, and defendant's failure to give instructions to the owner (as to after-treatment) caused unnecessary suffering.

Dangerous Drugs Act Conviction Quashed.

"HYPOTHETICAL ORDER IN COUNCIL."

On Monday last, the Court of Criminal Appeal allowed the appeal against conviction of Colonel John Kynaston, formerly of the Royal Army Medical Corps, who was recently convicted at the Central Criminal Court of aiding, abetting, and procuring a man whom he was treating for catarrh to obtain medicinal opium, contrary to the Dangerous Drugs Act, 1925, and was fined £10.

Colonel Kynaston appeared in person; Mr. H. D. Roome for the prosecution.

Colonel Kynaston said that the Dangerous Drugs Act, 1925, was passed to prevent a very abominable traffic, and it was a disgrace for anyone to have a conviction under that Act recorded against him. It was particularly important for him, not only because he was a member of the medical profession in the ordinary acceptance of the term, but also because the Secretary of State had power, on the ground of a conviction under the Dangerous Drugs Acts, to take away the right which he had to keep a shop and to sell medicines and poisons under the Pharmacy Act, 1868, despite the fact that his name had been removed from the Medical Register by order of the General Medical Council.

The appellant went on to argue that his name had been wrongly removed from the Medical Register. The General Medical Council had made their order as the result of a letter which he had written to a local newspaper, "an offence which," he added, "has been copied by a number of distinguished medical men much more than I have ever done."

The Lord Chief Justice said that the point that the appellant's name ought still to be on the Medical Register was not open to him. The case started with the fact that he was an unregistered medical man.

OBJECT OF THE ACTS.

Colonel Kynaston then submitted that there was nothing in the Dangerous Drugs Acts to prevent an unregistered medical practitioner from properly carrying on his work; the object of the Acts was to prevent the improper use of the drugs which came within them. It would lead to absurdity if the words "medical practitioners" in Section 1, Sub-Section 7 (c) of the Dangerous Drugs Act, 1920, meant only registered medical practitioners, because unregistered practitioners would then be given a greater liberty than registered practitioners by being omitted from the restrictive scope of the Acts. When Section 34 of the Medical Act, 1858, provided that words in any Act of Parliament which imported persons recognised by law as medical practitioners should be construed to mean registered medical practitioners, it was not apprehended that the General Medical Council would assume powers to which they were not entitled.

The prescription which he gave could have been made up in such a way that the Dangerous Drugs Acts would not have applied to it—namely, if the ingredients used in making up the pills prescribed were such that the percentage of medicinal opium fell below the specified percentage. When he ordered the prescription in question he knew nothing of the Secretary of State's Regulations. In ordinary practice he did not give prescriptions containing dangerous drugs. If the Court held that every prescription containing any medicinal opium came within the Act it would be a decision that would astound every chemist and druggist in the land.

The Lord Chief Justice: That does not intimidate me in the least. (Laughter.)

Mr. Roome said that it had only just been brought to his attention that the Dangerous Drugs Act, 1925—under which all the proceedings had progressed—had never been brought into operation by Order in Council as it had to be. He submitted, however, that the case was covered by Section 8 of the Act of 1920, the effect of which, like that of Section 3 and Section 4 Sub-section 1 of the Act of 1925, was that medicinal opium was a definite drug and was absolutely prohibited.

The Lord Chief Justice: If you had known that this pleasant method of legislating by a hypothetical and contingent Order in Council had been adopted, your conduct of the case would have been somewhat different.

JUDGMENT.

The Lord Chief Justice, in giving the judgment of the Court, said: This appeal has no real merits, but we are compelled to quash this conviction. By one of those devices referred to in that phrase of Hallam's which tells us that we must venerate that which we cannot presently apprehend in the Constitution, the Dangerous Drugs Act, 1925, by Section 7, Sub-section 3, provides that the Act "shall come into operation on such date as His Majesty may by Order in Council appoint. . . ." There has been no Order in Council and the Act has, therefore, not come into force. This prosecution was conducted on the assumption that it had. It thus resembles nothing so much as pulling a bell-handle witout a bell at the other end. This appeal is allowed.

Solicitor.—The Director of Public Prosecutions.

—*The Times.*

NOTES AND NEWS.

The Editor will be glad to receive items of professional interest inclusion in these columns.

Diary of Events.

Dec. 20th.—Meeting of the Editorial Committee of the N.V.M.A. at 10 Gray's Inn Square: 4-30 p.m.

1927

Jan. 3rd.—Meeting of the Provisional Committee, N.V.M.A. at the Royal Clarence Hotel, Exeter, 2-30 p.m.

Jan. 5th.—N.V.M.A. Council and Committee Meetings.

Jan. 6th.—R.C.V.S. Committee Meetings.

Jan. 7th.—R.C.V.S. Council and Committee Meetings.

Comparative Medicine Section for B.M.A. Congress.

We observe with pleasure that a new and important departure is notified in the advance programme "Sections and their Presidents," published in the *British Medical Journal* of December 4th, in connection with the ninety-fifth Annual Meeting of the British Medical Association to be held at Edinburgh in the latter part of July, 1927. For the first time in the history of the Association there will be a Section of Comparative Medicine and it will be presided over by O. Charnock Bradley, M.D., D.Sc., M.R.C.V.S., Principal of the Royal (Dick) Veterinary College, Edinburgh.

. . . . . .

There will be a special discussion on "Trypanosomiasis in Man and Animals," on Wednesday, January 5th, 1927, at 5-30 p.m., at the Royal Society of Medicine, 1 Wimpole Street, London, W.1., the Sections of Comparative Medicine and Tropical Diseases and Parasitology taking part. It is hoped that members of the Comparative Section will attend in as strong force as possible and bring friends.

Army Veterinary Service.

LONDON GAZETTE—WAR OFFICE—REGULAR FORCES.

Dec. 7th.—Maj. H. Bone, M.C., is restd. to the estabt. (Dec. 6th).

TERRITORIAL ARMY.

Maj. (Prov.) R. C. G. Hancock is confirmed in his rank (Oct. 9th, 1925); Maj. (Prov.) W. Barr is confirmed in his rank (March 8th); Capt. T. W. M. Cameron to have precedence as from Oct. 1st, 1921 (Dec. 8th).

The date of promotion of the follg. Majs. to be July 1st, and not as previously stated:—W. A. Macgregor, W. Walker.

The follg. Capts. to be Majs. (July 1st), except where otherwise stated:—G. Green, J. R. Conchie, R. Hayes, R. R. Dalling, W. H. Kirk, A. A. Comerford, T. J. Kenny, T. Dalling, J. G. E. Gallie (Capt., Res. of Off.), H. W. Stevens, W. G. Burndred, D. E. Orr (July 16th), T. Grahame (Aug. 6th), T. Hicks (Oct. 2nd).

The date of promotion of the follg. Capts. to be July 1st, and not as previously stated:—A. K. Cameron, W. J. Leyshon, A. McLean.

The follg. Lts. to be Capts. (July 1st):—A. J. McCarmick, W. Gibson, J. H. Mason.

R.C.V.S. LIBRARY.

The following books have been added to the library during the past week:—

Gowen—"Manual of Dairy Cattle Breeding."
Gowen—"Milk Secretion."
Calmette—"Tubercle Bacillus Infection in Man and Animals."
Fox—"Disease in Captive Wild Animals and Birds."
Ernst—"Milk Hygiene."
Underhill—"Parasites and Parasitosis of Domestic Animals."
Milk—"Veterinary Pharmacology and Therapeutics."
Kellner—"Scientific Feeding of Animals."

Books may be borrowed from the library by members of the College on payment of postage both ways.

Apply to the Librarian, 10 Red Lion Square, London, W.C.1.

CORRESPONDENCE.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

Sewage Poisoning of Cattle.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—In your last issue, Mr. Justice Romer, in giving judgment in an action in the Chancery Court, is reported to have said that the plaintiff had experienced trouble with his cattle for some years past—his cows aborted, they were sterile and in poor condition. In olden days, his Lordship added, some wretched woman would no doubt have been burned at the stake in consequence of this state of affairs.

It may not be without interest to recall that, at the trial of the Suffolk witches in the reign of Charles II., Robert Sherringham deposed against Rose Cullenden that, as he passed with his cart and four horses, the axle-tree of his cart touched her house and broke down some part of it, at which she threatened him that his horses should suffer for it. And so it happened, for all those horses died within a short time after, and since that time he had had great losses by the sudden dying of his cattle, and so soon as his sows pigged the pigs would leap and caper, and immediately fall down and die. Many other strange things had happened to him, and for this and other witchcraft she was found guilty and sentenced to death. The number of executions for witchcraft in the 16th and 17th centuries for Great Britain reached 30,000. Prosecutions of witches were abolished by the English Witchcraft Act, 1735. Although we now regard witchcraft as a superstition of the ignorant, there is little doubt that the judges gave their decisions honestly in the light of the evidence before them.

Mr. Justice Romer further observed that the more modern view was to attribute diseases of animals to bad luck, but in his judgment he found, from the evidence given before him, that the damage to plaintiff's cattle was caused by sewage poisoning. Is it not possible that, as scientific method becomes more widely employed, a time may come when the so-called "sewage poisoning of cattle" (concerning which very little is to be found in the text books and literature) will be regarded as a superstition?—Yours faithfully, G. W. CLOUGH, D.Sc.

Royal Veterinary College, London, N.W.1.

* * * * *

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—In the *Veterinary Record* of 11th December, under the above heading, Mr. Alex. Levie in cross-examination in court "agreed that Johnë's disease was rather prevalent, but its symptoms were not the same as those he observed in the heifer" suffering from sewage poisoning. The judge, apparently guided by Mr. Levie's evidence, said "the symptoms of the two diseases were very similar."

Would Mr. Levie favour your readers with a detailed account of how he distinguishes between the two conditions on *post-mortem* examination?

What, for example, are the indications in the lesions from sewage poisoning which enable one to say definitely that the case is not one of Johnë's or some other disease?—I am, etc., S. H. GAIGER, F.R.C.V.S.

The University of Liverpool,
Department of Veterinary Pathology.
13*th December*, 1926.

The Proposed Alteration in the Students' Curriculum.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—There seems to be a move in contemplation with regard to Stable Management which it is proposed to merge with Hygiene for examination purposes. May I, as an old examiner in the latter subject for some 14 years, offer a few remarks upon the matter?

Hygiene, as at present arranged, includes not only such important subjects as air, water, feeding stuffs, and byre and stable construction, but also (in the oral) the conformation of the horse. Now my colleague (who is not exactly a novice on the examining board) and I found that it was difficult at most of the veterinary colleges to combine that part dealing with conformation with the rest of the subject. In the first place, it necessitated a live animal, which, generally speaking, could not be in the same room as the other specimens provided for us at the various centres, and secondly (which is more important), the time allowed for the student (say seven-and-a-half minutes out of their total of fifteen) was all too short to do justice to him. We used to get so little out of them in that brief space of time that it seemed fairer to gauge the extent of their knowledge by confining ourselves to the rest of the curriculum.

In my opinion, Stable Management is an important subject—more important nowadays, perhaps, than it used to be, on account of the number of students who have no practical experience of animals before they enter college; and the conformation of the horse could very well be incorporated, seeing that the animal is already there for

manipulation purposes. Further, the subject of Hygiene, as at present arranged for in the college curriculum, ought to be extended and brought more up-to-date, so as to make the graduates more fitted to undertake public health work. It is worth while considering whether meat inspection should not be included in Hygiene, but, if so, extra time for the oral ought to be allowed. To recapitulate, my suggestions, as far as Stable Management and Hygiene are concerned, are :—

(1) Leave Stable Management in Class B, as at present, but add to it "Conformation of Horse."
(2) Develop Hygiene in the direction of public health work, somewhat on the lines of the post-graduate course.

Yours faithfully, HENRY TAYLOR, F.R.C.V.S.
Haywards Heath.

Victoria Veterinary Benevolent Fund.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—I have to report that since last week I have received only one further subscription of £1 1s. in answer to the appeal you kindly made. On the other hand, one member of the Fund sends a 10s. note to be given to one of the widows mentioned in your editorial, "to buy something for the little ones for Christmas." Another subscriber offers to double his subscription if others will do the same—but the policy of the Council has hitherto been not to ask a few members to bear a heavy burden, but to get a large number of members to pay a small subscription.

I am pleased to be able to announce that in a letter just received from the Honorary Treasurer, Mr. West, who is a Life Member of the Fund, he states that he would still wish to subscribe annually, and encloses a cheque for £5 5s. which he hopes to renew from year to year as long as he can.

This very generous personal contribution from one to whose activities the Fund owes much of its present income, will be all the more welcome if it should cause other members to become subscribers and to promise regular annual subscriptions of 10s. 6d. There is still a week to Christmas.—Yours faithfully, FRED BULLOCK, Secretary, Victoria Veterinary Benevolent Fund.

10 Red Lion Square,
London, W.C.1.
14*th December*, 1926.

AN APPEAL.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—Nobody reading the editorial appeal in a recent issue of the *Record* on behalf of the Victoria Veterinary Benevolent Fund could have failed to be impressed by the dire necessity therein revealed. It is dreadful to think that there are so many of our very own people who, from one cause or another, are on the verge of starvation. The fact that only the odd 600 out of an aggregate of 3,600 members of the profession should interest themselves in the grave misfortunes of their fellow members is not creditable to us.

Many, I know, find their own circumstances none too comfortable and can ill afford to part with cash. Other and more affluent members would undoubtedly subscribe, and handsomely, if only they would pause to think for a moment of the misery which exists, and of the happiness their contributions would bring. It is well known that "the willing horse is often worked to death," thus it is not so much to those who already subscribe that I appeal, but to those who so far have failed to respond to the many eloquent entreaties for assistance.

Whilst one cannot help many, many can help one, and even the smallest donations would, I am sure, be gratefully received. My appeal at the moment, however, chiefly concerns a plan by which I believe funds could be raised. It is that all members or their wives and friends should forward to Mr. Alfred West any articles of clothing for which they feel they have no further need. Mr. West, with his usual enthusiasm and kind heart, has undertaken to receive such articles and to arrange for their profitable disposal. In most cases they would be sold to dealers for cash. Yet, doubtless, many of those unfortunates on the list of the Fund's recipients would welcome the actual garments, for, as most of them are women, they would know how to renovate or remake such articles to suit their children.

Personally, I dispose of quite a lot of stout and serviceable —if somewhat shabby—boots, suits and other things during the course of a year, and I have often felt that, rather than sacrifice these articles to an itinerant plant vendor at the door, I would prefer to send them to the V.V.B. Fund. For one person to do so would be quite useless; for hundreds to do so would mean, I fancy, an unexpected and gratifying new source of income.

This scheme is put forward in the hope that something tangible will be the outcome and, rather than that it should be said that I am lightly heaping an unbearable burden upon the shoulders of the willing officers of the fund, I would undertake to share a proportion of the task, if called upon.

With Xmas approaching, I trust the many readers of this letter will open their hearts and purses in a common endeavour to help those who, through failing health, old age, and other circumstances, are unable to help themselves.—Yours faithfully, HAMILTON KIRK, M.R.C.V.S.

67 Wigmore Street, W.1.
10*th December*, 1926.

The Profession in Fiction.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—In Miss Rose Macaulay's recent and much-advertised work of fiction, "Crewe Train," there occurs the following extract from a conversation between two of the characters :—

"What about her paternal relatives?" said Guy. Guy was twenty-five and in the Foreign Office, where he was more capable and industrious than he liked people to think. He was a clever fellow, though a dandy, with trifling and elegant whiskers.

"Impossible," his mother replied. "His father was a Vet. or something. They were quite nothing and of course are still. Denham can't go to them. Even if they would take her. She's quite uncouth enough as it is. You wouldn't believe she was Sylvia's girl. No, she must come to Mulberry Square."

What are we to think of the mentality of such writers so uninformed as to pen such inaccurate rubbish as the above?

Is it worth a protest or should it be treated with the contempt it deserves? Mr. Arnold Bennett is busy each week in the *Evening Standard* calling attention to the shallowness of the present fiction writers as compared with those of earlier generations, and it would seem that his diatribes are not altogether unjustified.

As a compelledly constant reader of novels, I frequently come across similarly pitiful stuff.—Yours obediently, E. ALFRED WEST, F.R.C.V.S.

81 Gray's Inn Road, London, W.C.1.
December 11*th*, 1926.

The Editor acknowledges the receipt of the following :—

Department of Agriculture, Punjab, *Veterinary Bulletin* No. 16, "Surra Transmission Experiments," by Kahan Singh, G.P.V.S., P.V.S.

Communications from Mr. Hugh Begg, Major G. W. Dunkin, and Lieut.-Col. T. D. Young.

Report of a meeting of the Scottish Metropolitan Division from Mr. W. C. Miller, Hon. Secretary.

National Veterinary Medical Association of Great Britain and Ireland.

EDITORIAL OFFICE : 10 Gray's Inn Square, London W.C.1.

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Journal of the American Veterinary Medical Association,

formerly

AMERICAN VETERINARY REVIEW

(Original Official Organ U.S. Vet. Med. Assn.).

Established 1877.

Edited and Published for the

American Veterinary Medical Association

(H. PRESTON HOSKINS, *Secretary-Editor*),

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